

FIG. 3A

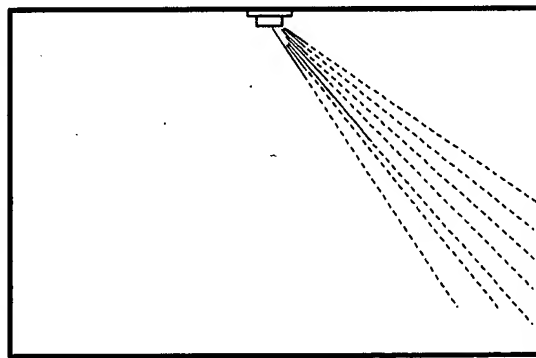


FIG. 3B

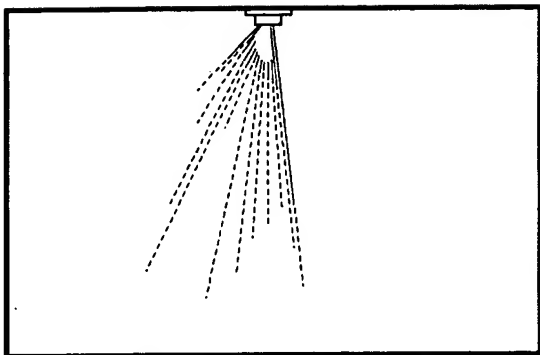


FIG. 3C

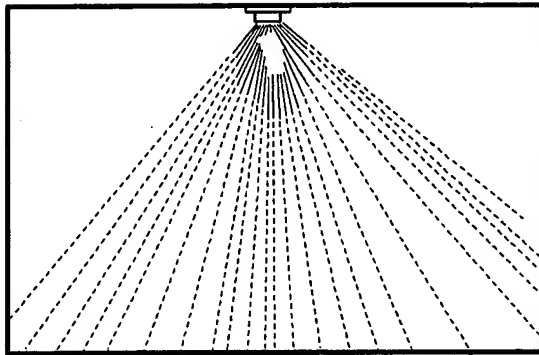


FIG. 3D

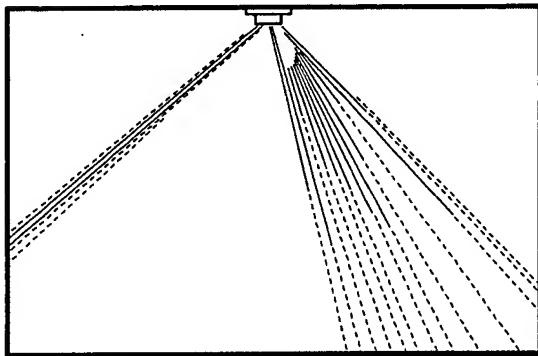


FIG. 3E

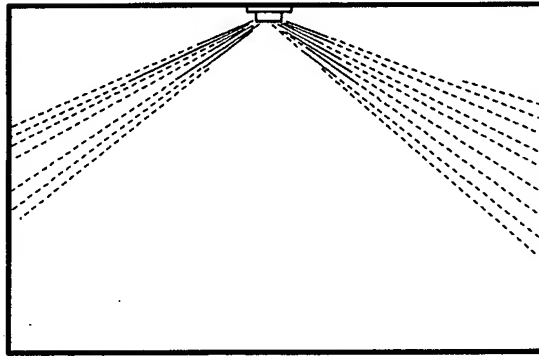


FIG. 3F

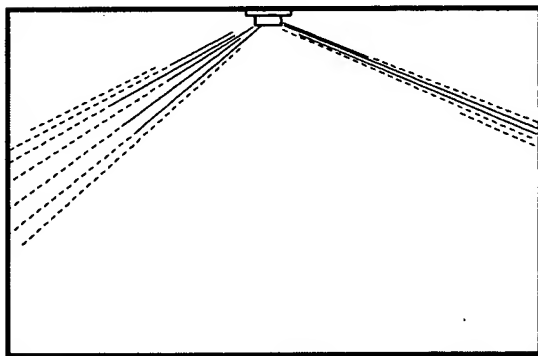


FIG. 3G

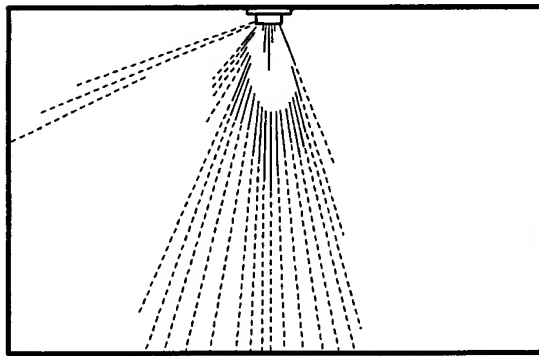


FIG. 3H

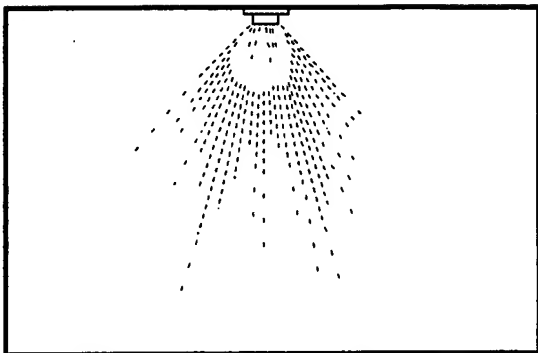


FIG. 3I

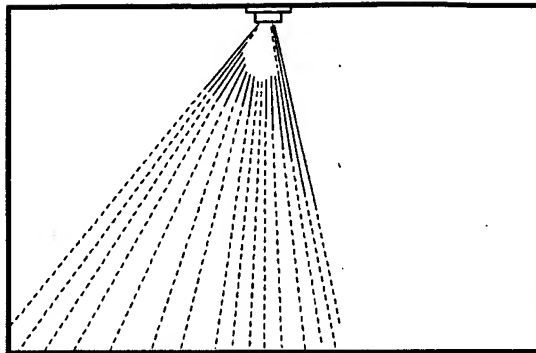


FIG. 3J

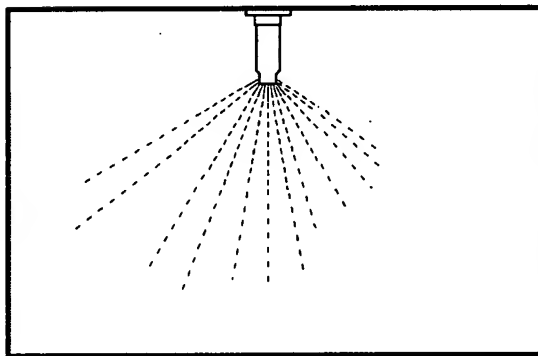


FIG. 3K

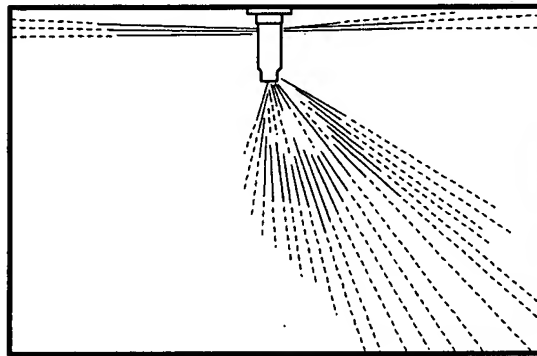


FIG. 3L

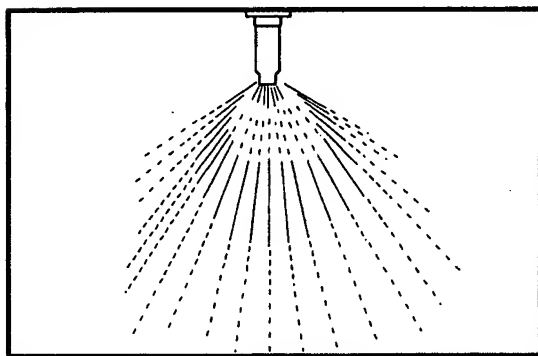


FIG. 3M

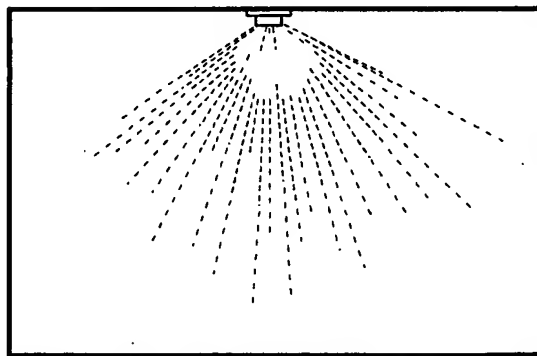


FIG. 3N

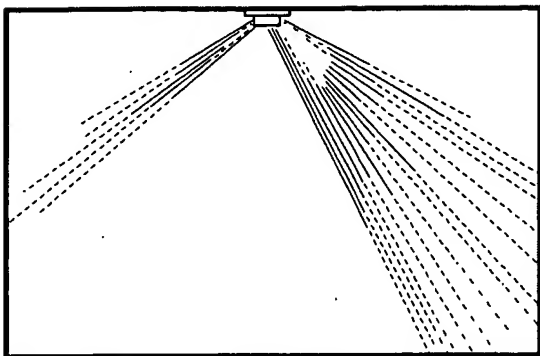


FIG. 30

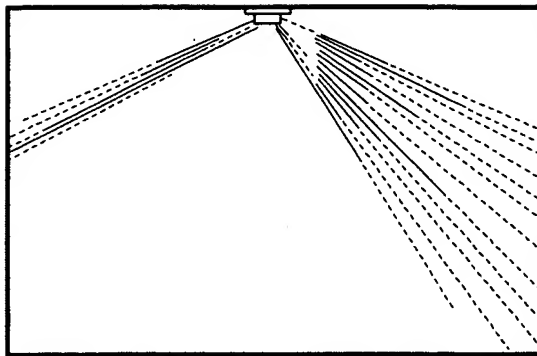
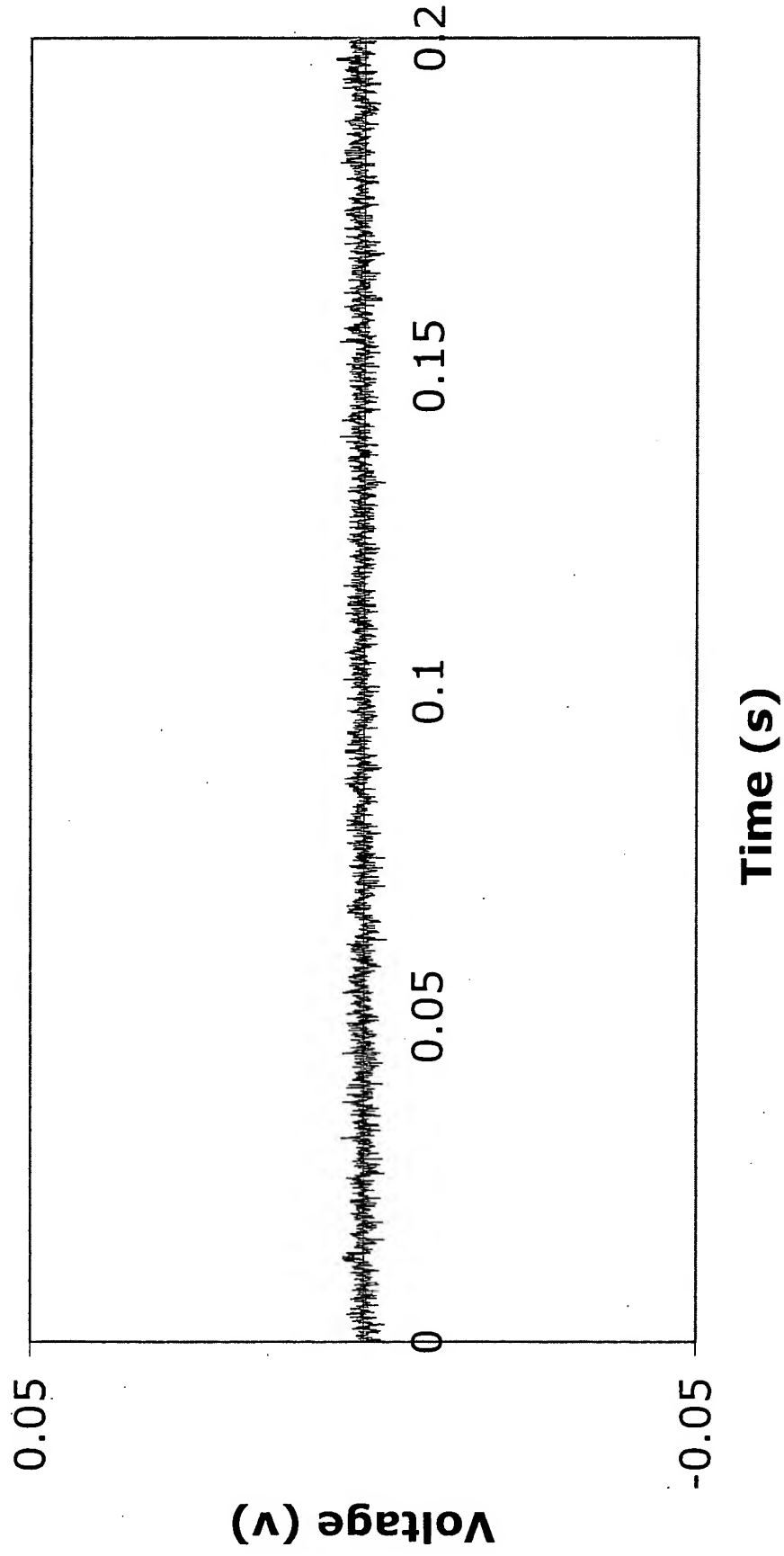


FIG. 3P

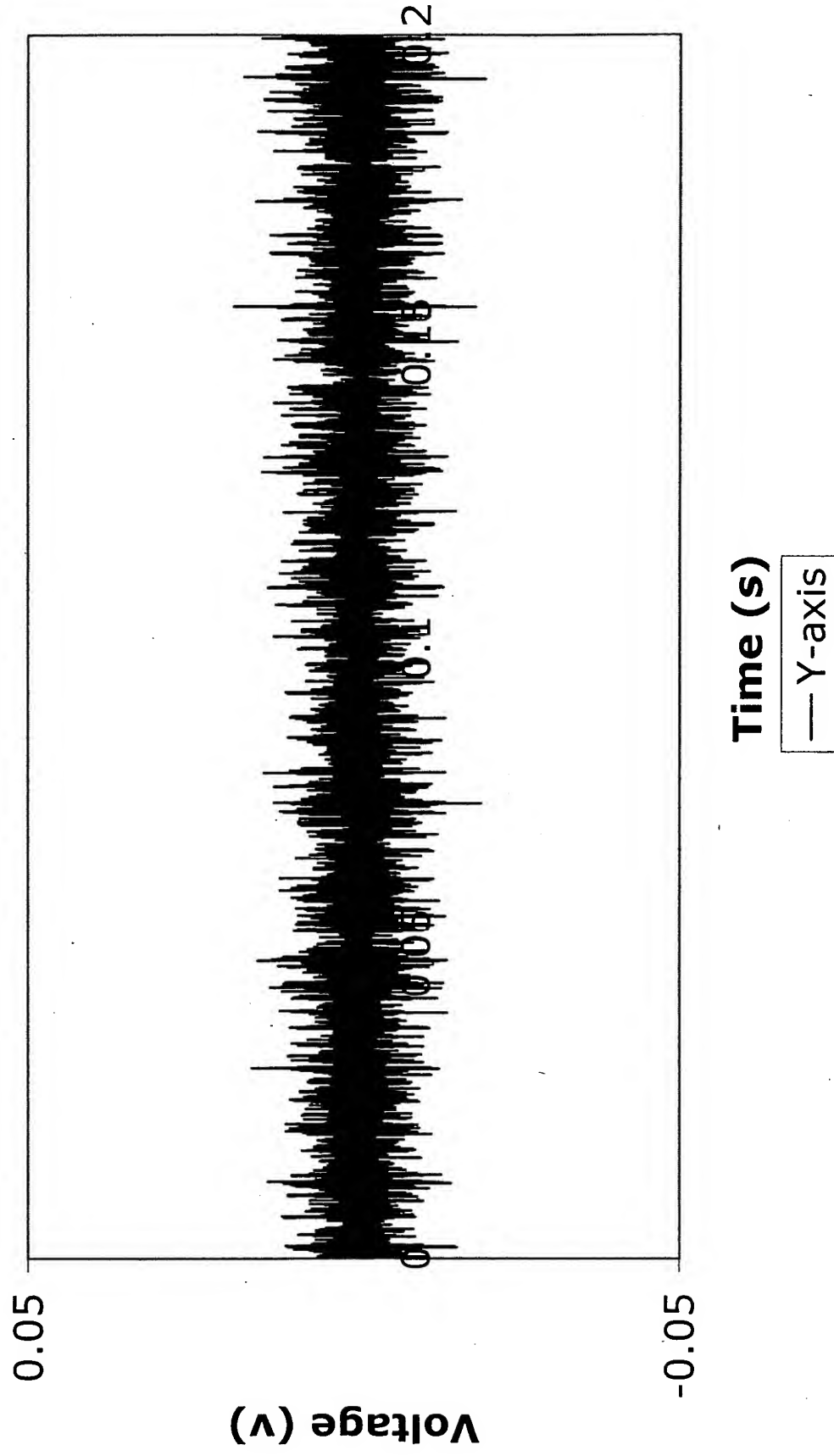
8001 nozzle at 300 kPa



— X-axis

Figure 4A

8001 nozzle at 300 kPa

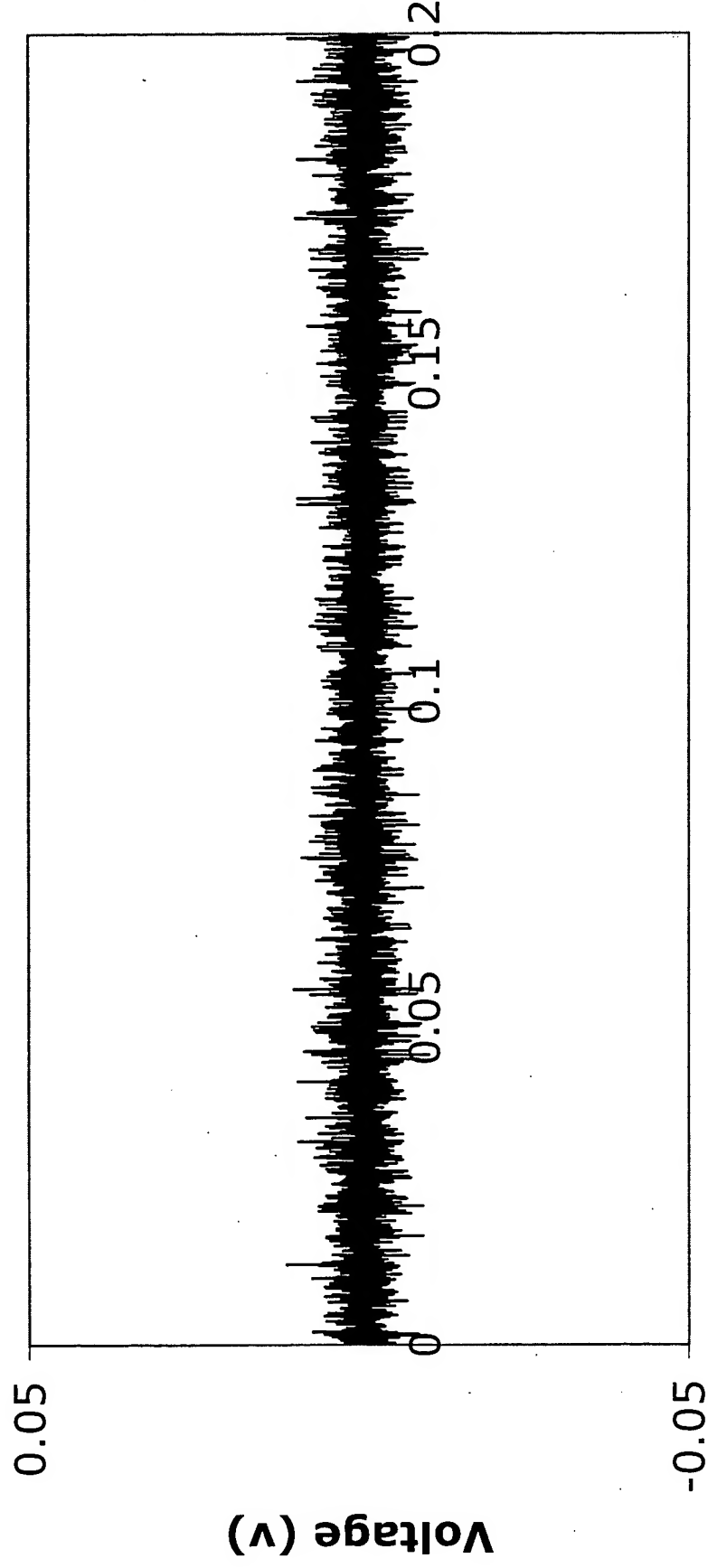


Time (s)

— Y-axis

Figure 4B

8001 nozzle at 300 kPa



Time (s)

— Z-axis

Figure 4C

8001 nozzle 300 kPa

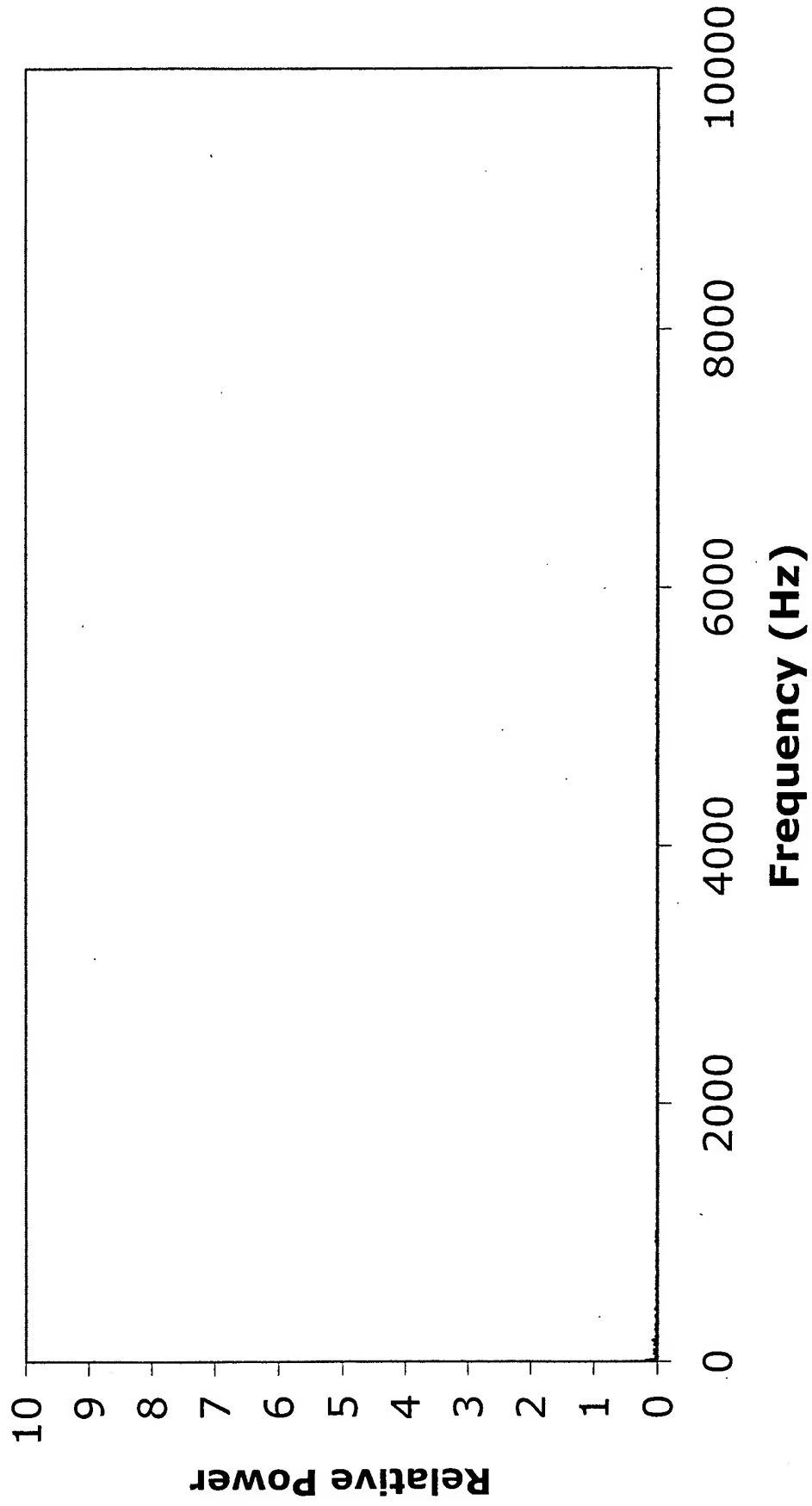


Figure 4D

8001 nozzle 300 kPa

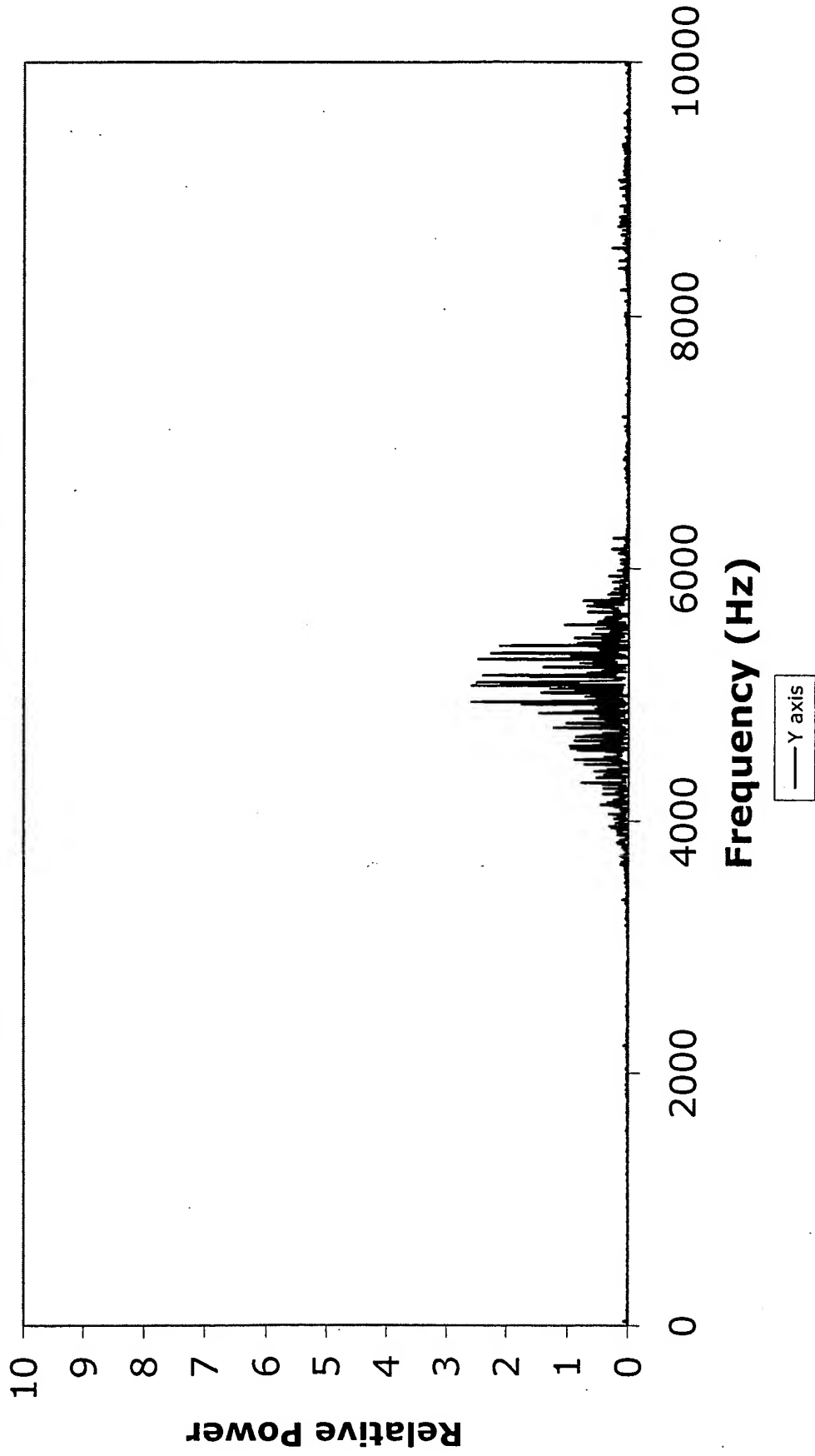
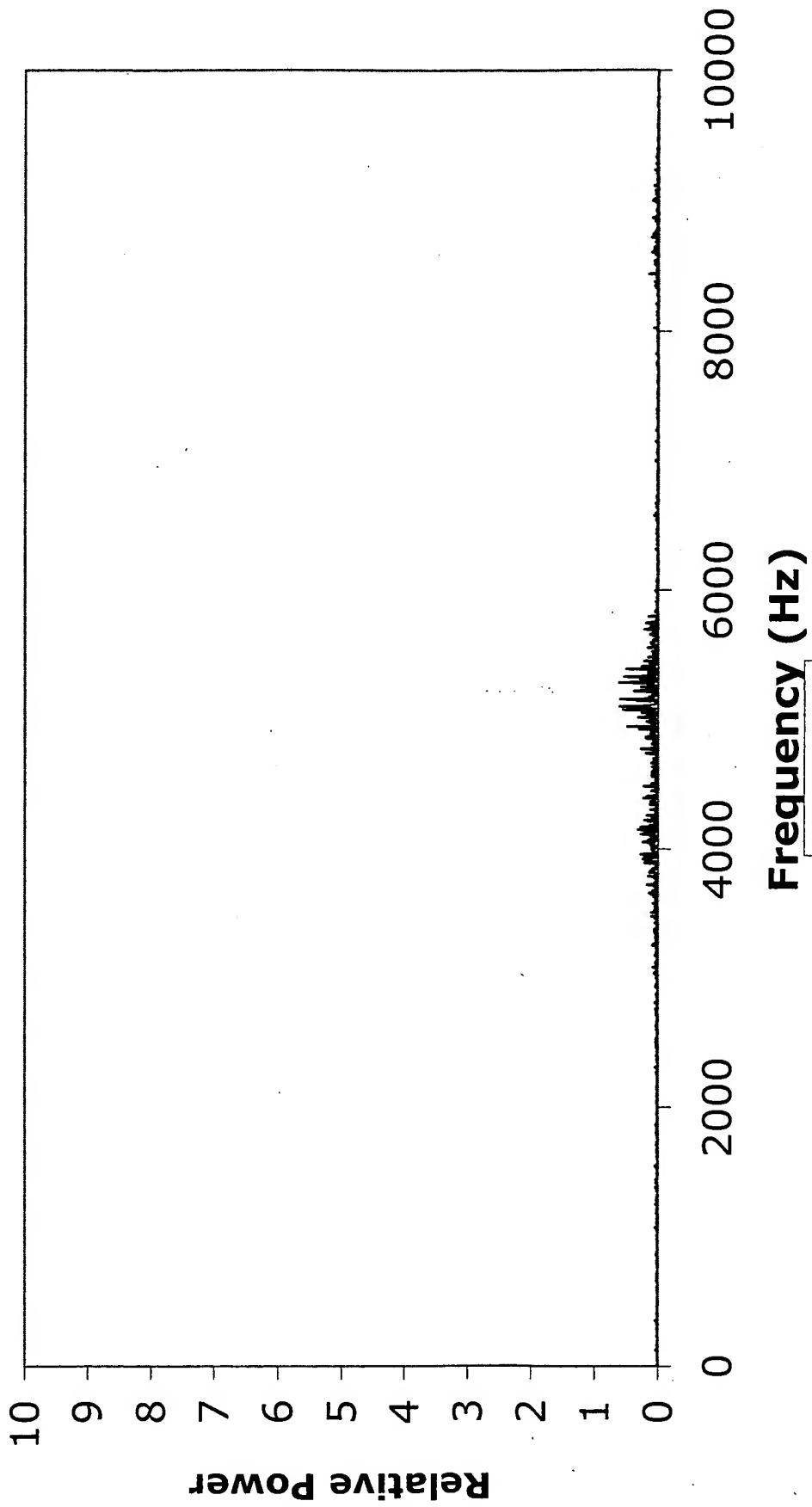


Figure 4E

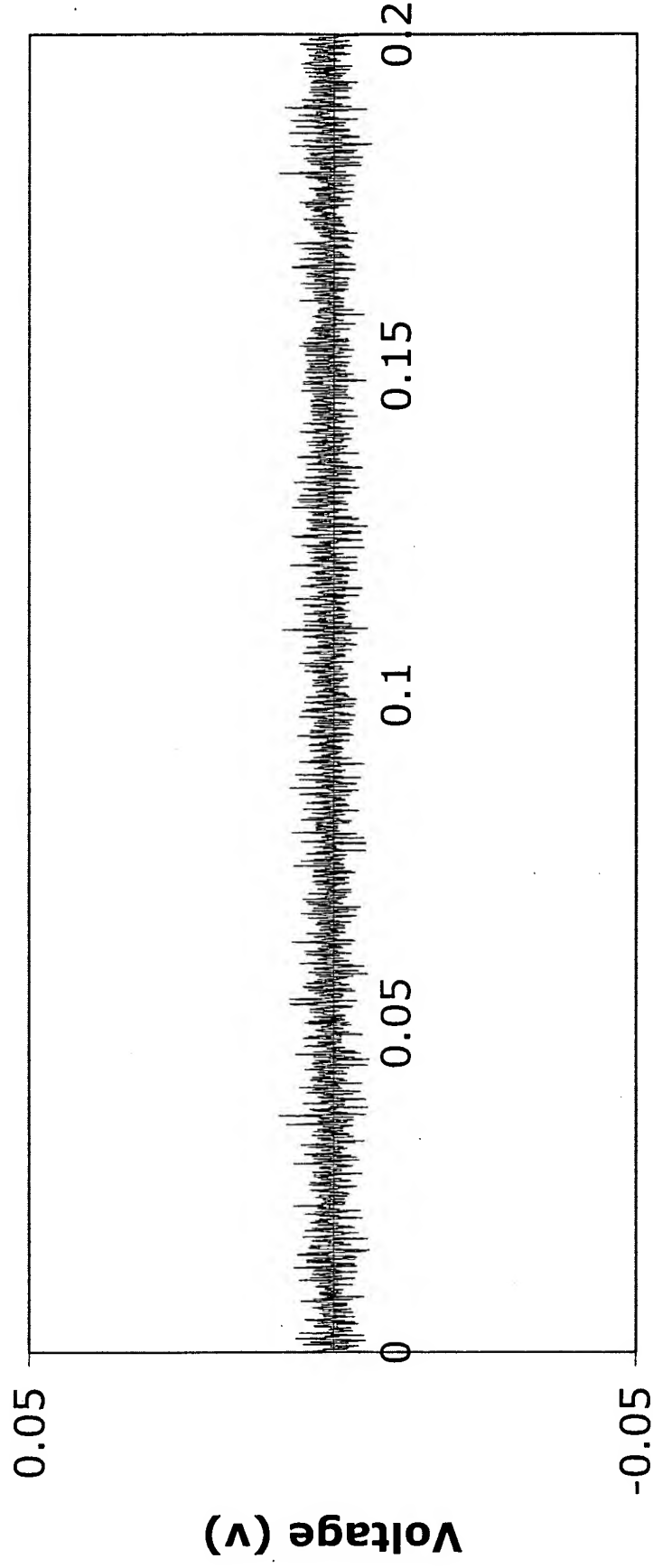
8001 nozzle 300 kPa



— Z axis

Figure 4F

8004 nozzle at 300 kPa

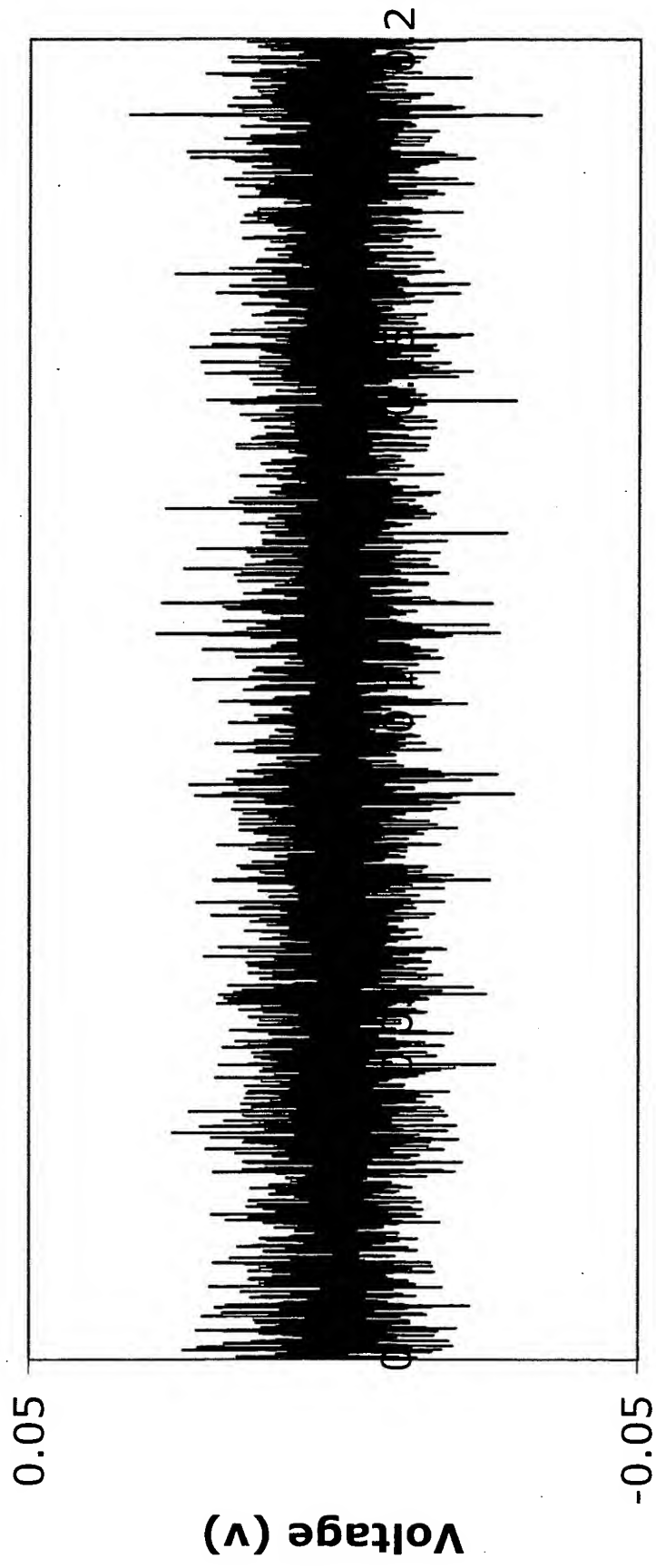


Time (s)

X-axis

Figure 4G

8004 nozzle at 300 kPa

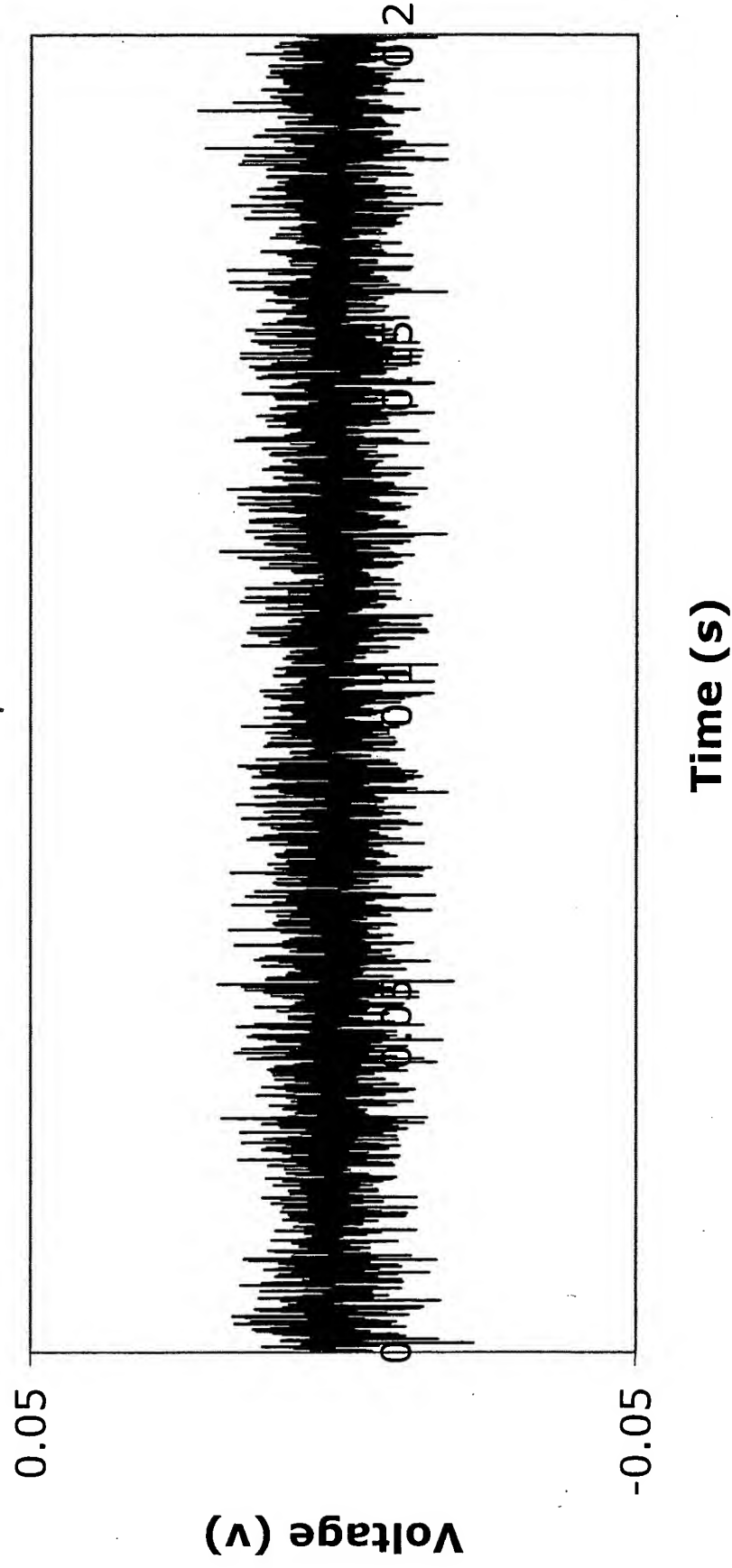


Time (s)

— Y-axis

Figure 4H

8004 nozzle at 300 kPa



— Z-axis

Figure 4I

8004 nozzle at 300 kPa

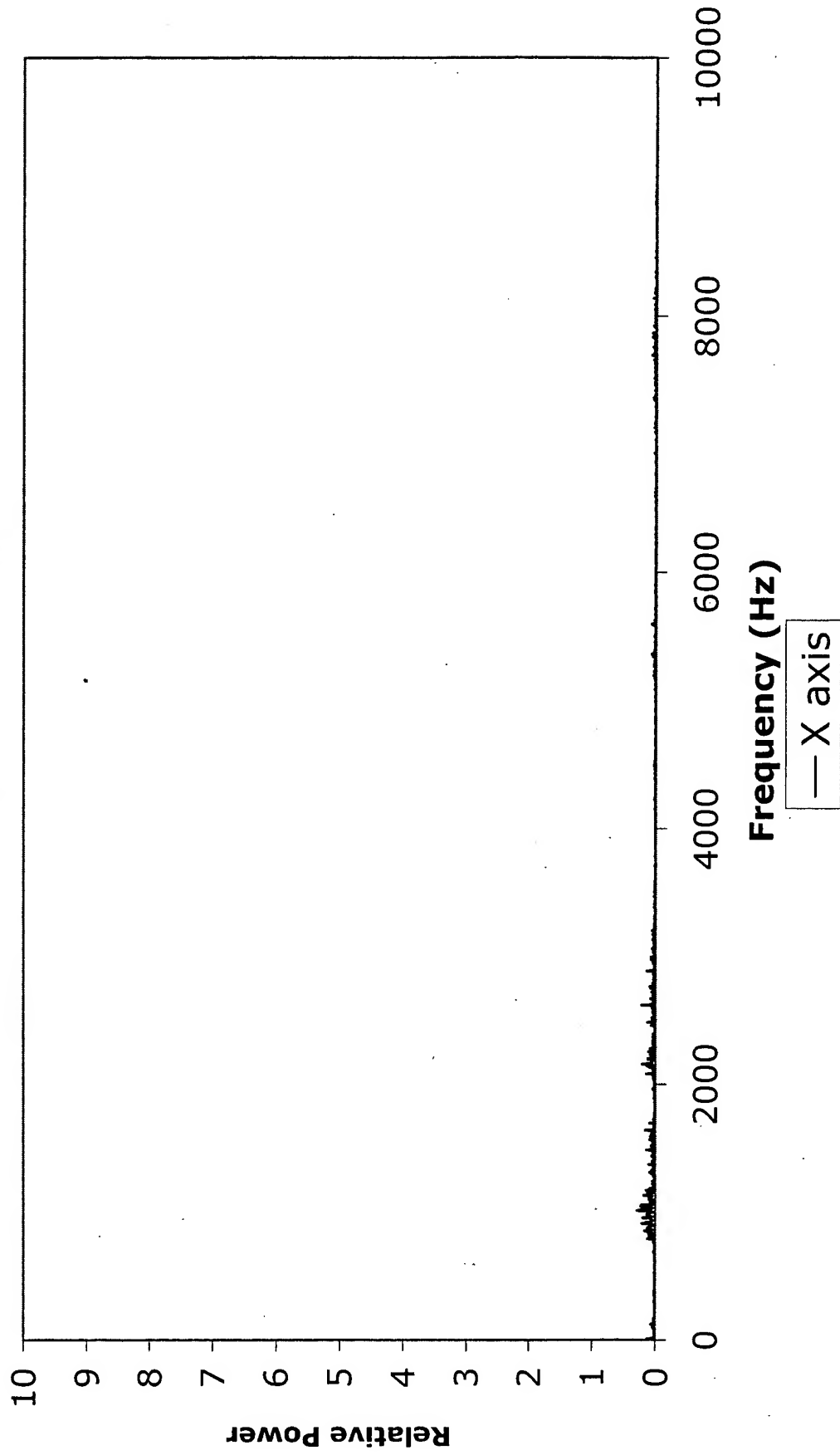


Figure 4J

8004 nozzle at 300 kPa

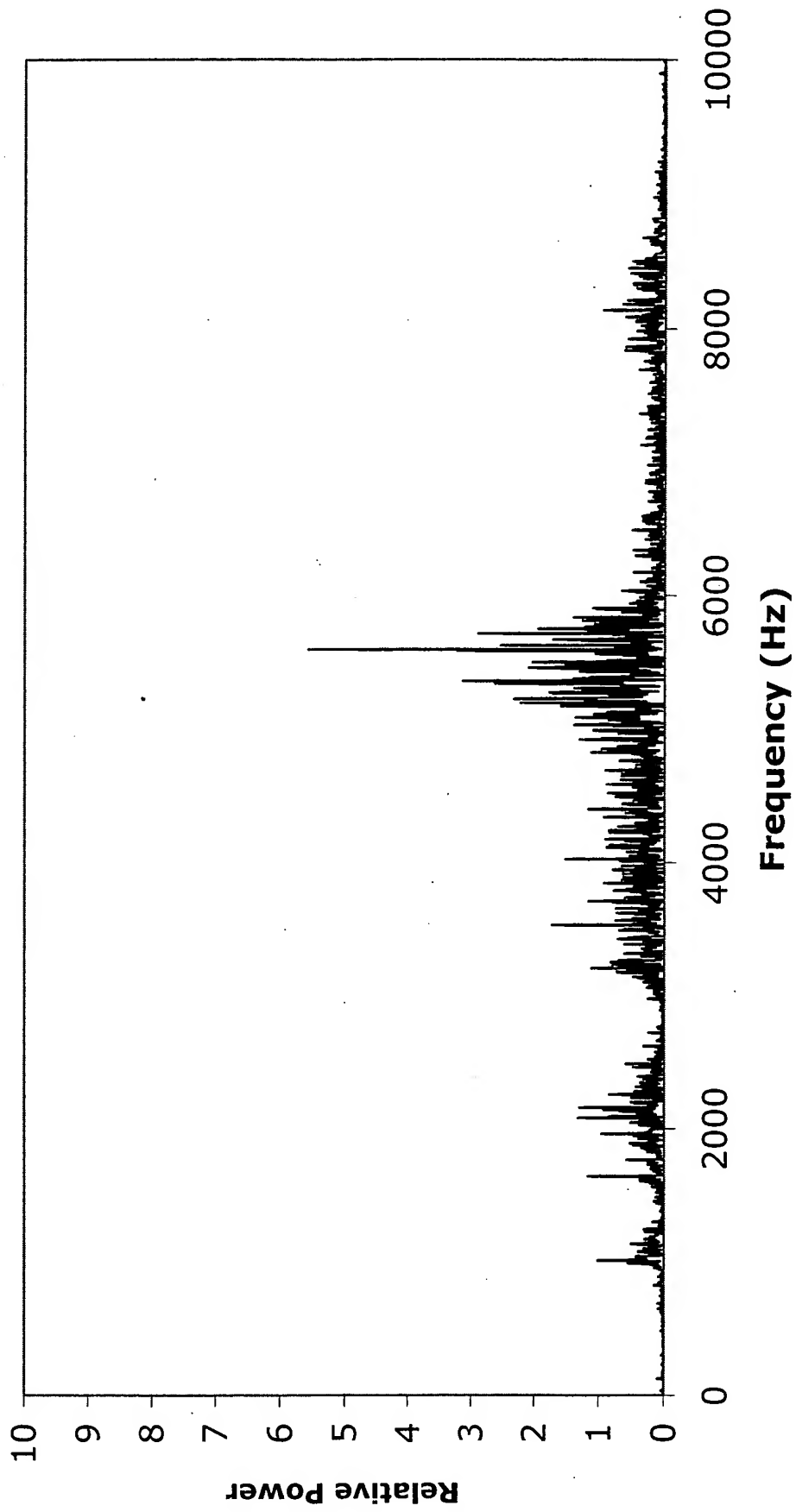


Figure 4K

8004 nozzle at 300 kPa

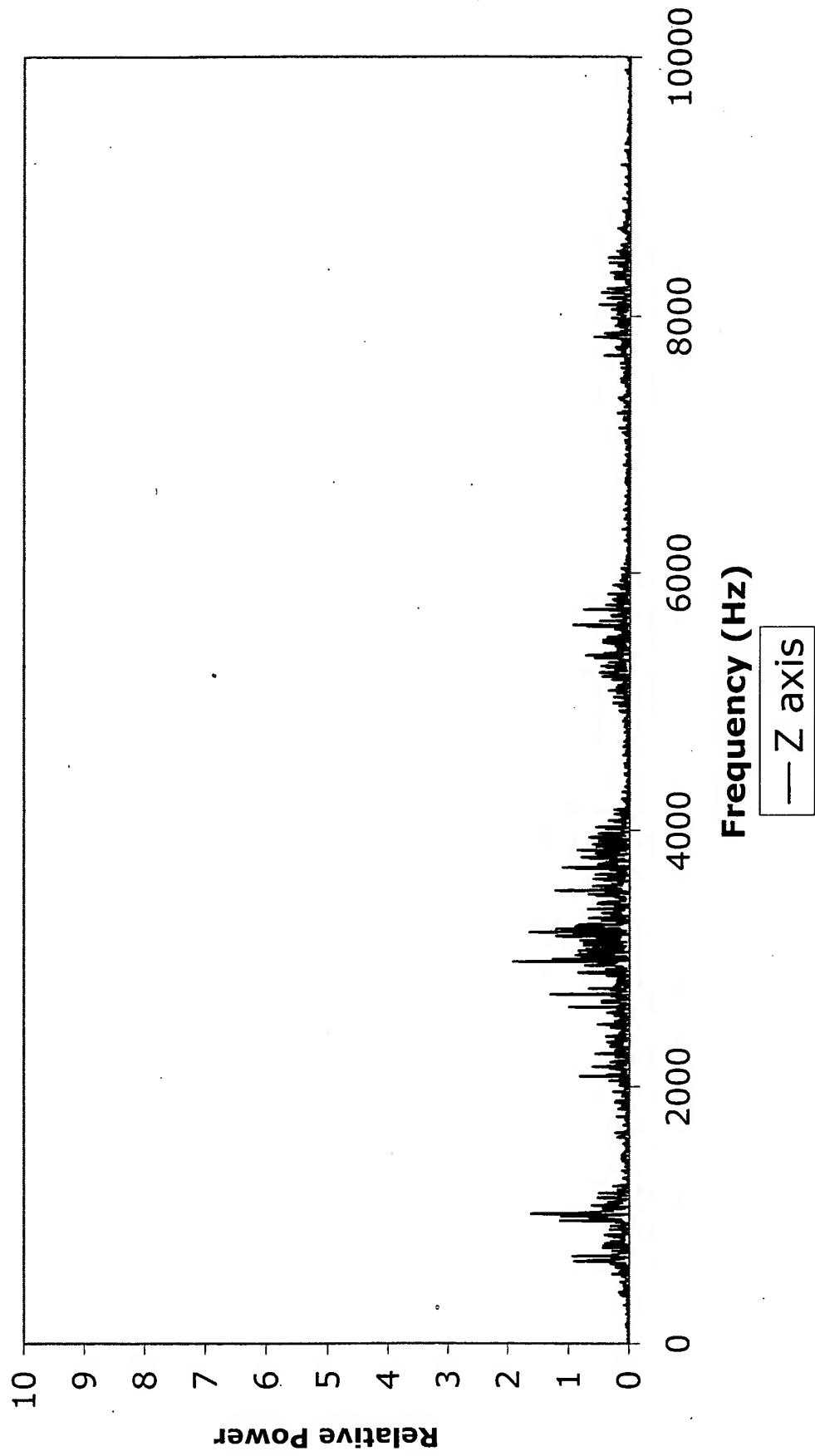
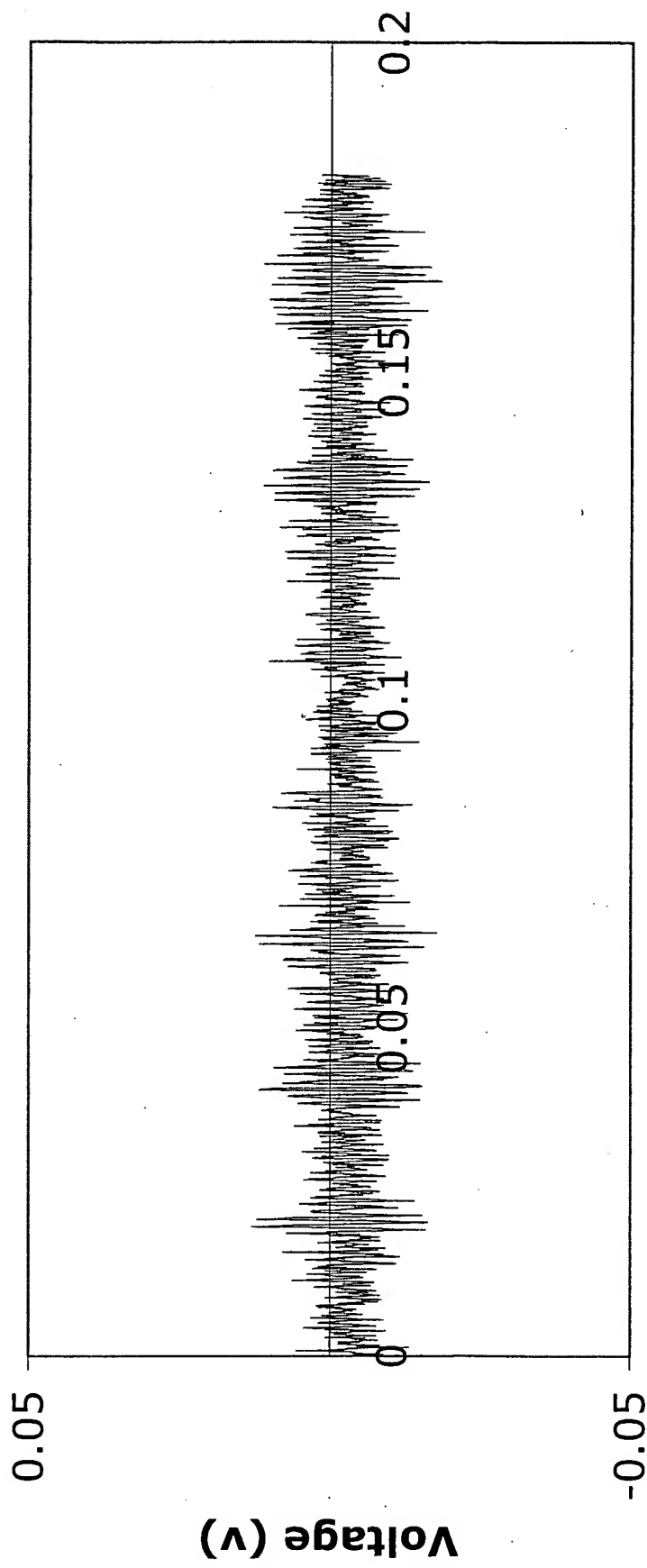


Figure 4L

8008 nozzle at 300 kPa

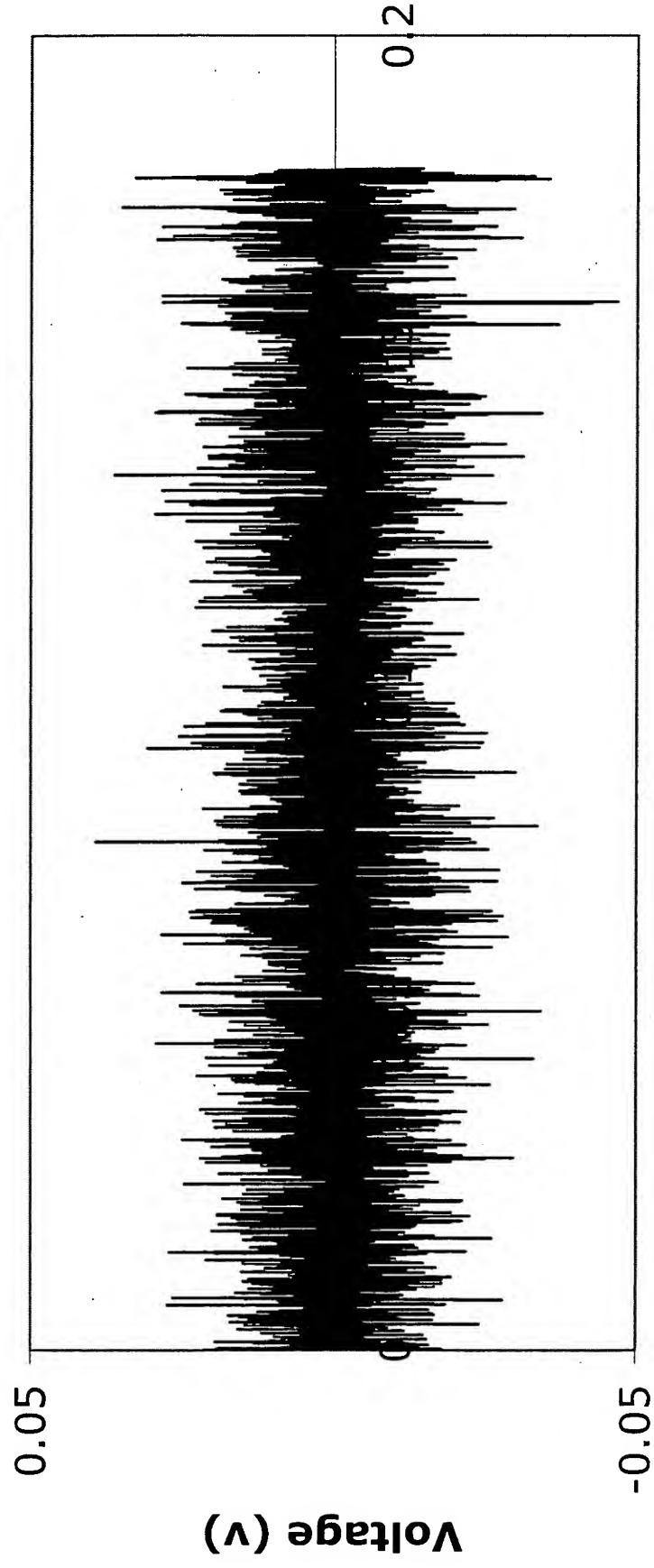


Time (s)

— X-axis

Figure 4M

8008 nozzle at 300 kPa

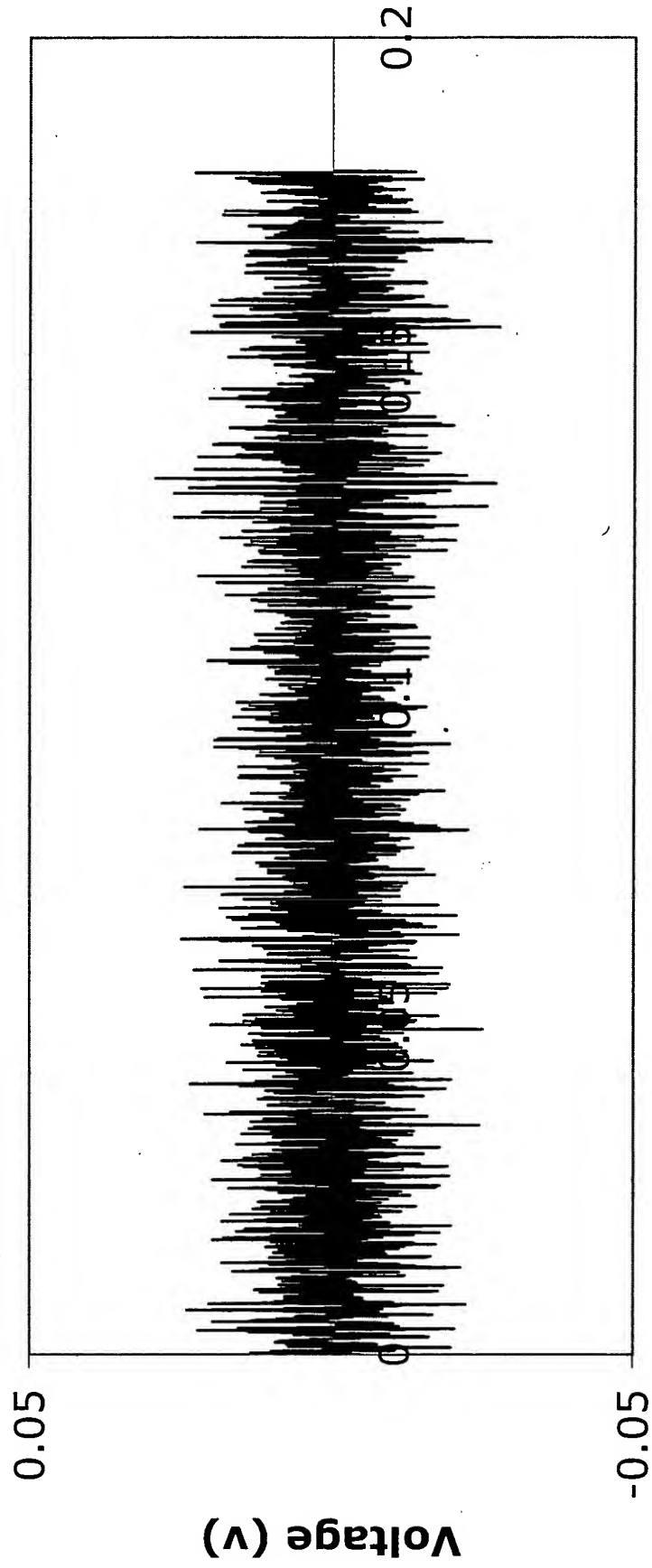


Time (s)

— Y-axis

Figure 4N

8008 nozzle at 300 kPa



Time (s)

— Z-axis

Figure 40

8008 nozzle 300 kPa

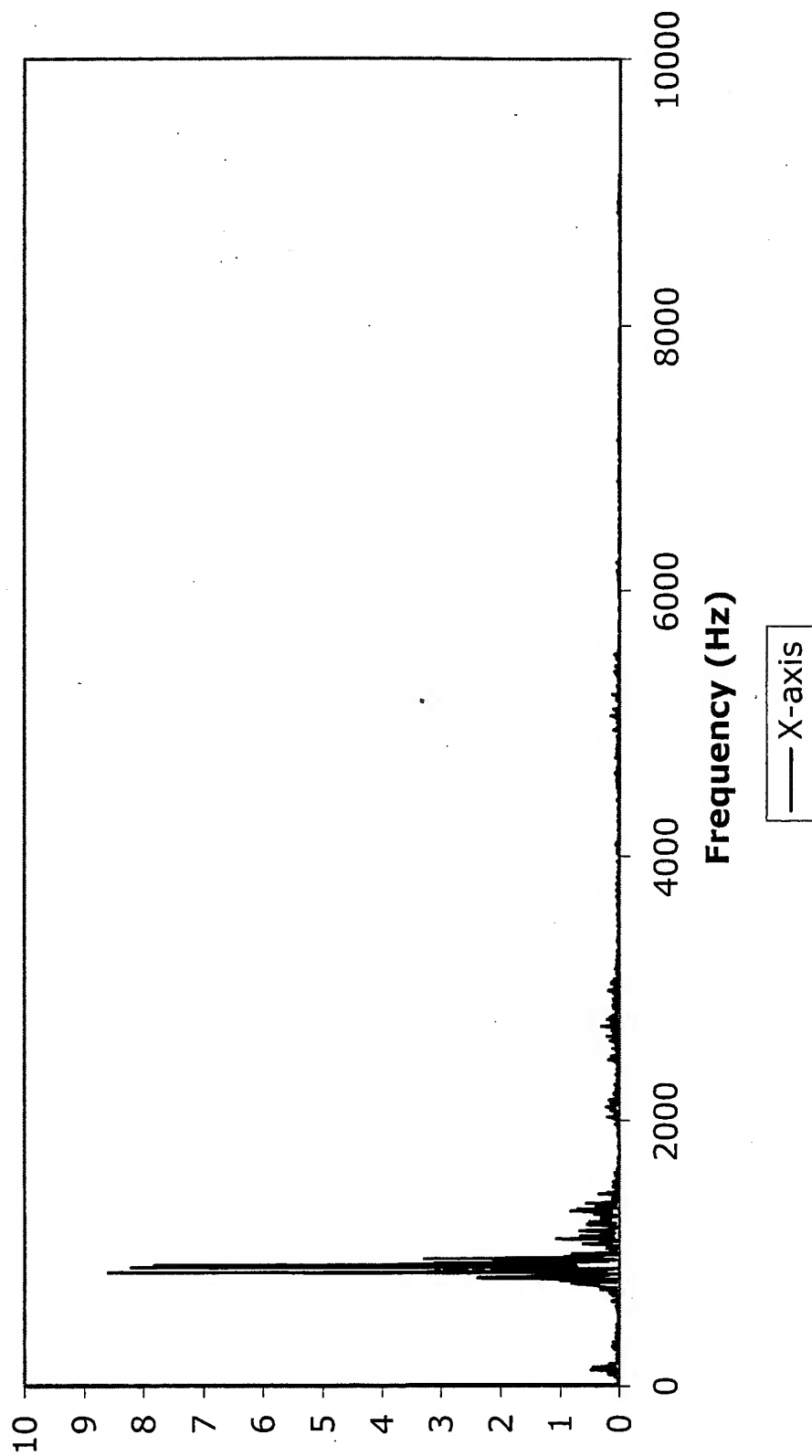


Figure 4P

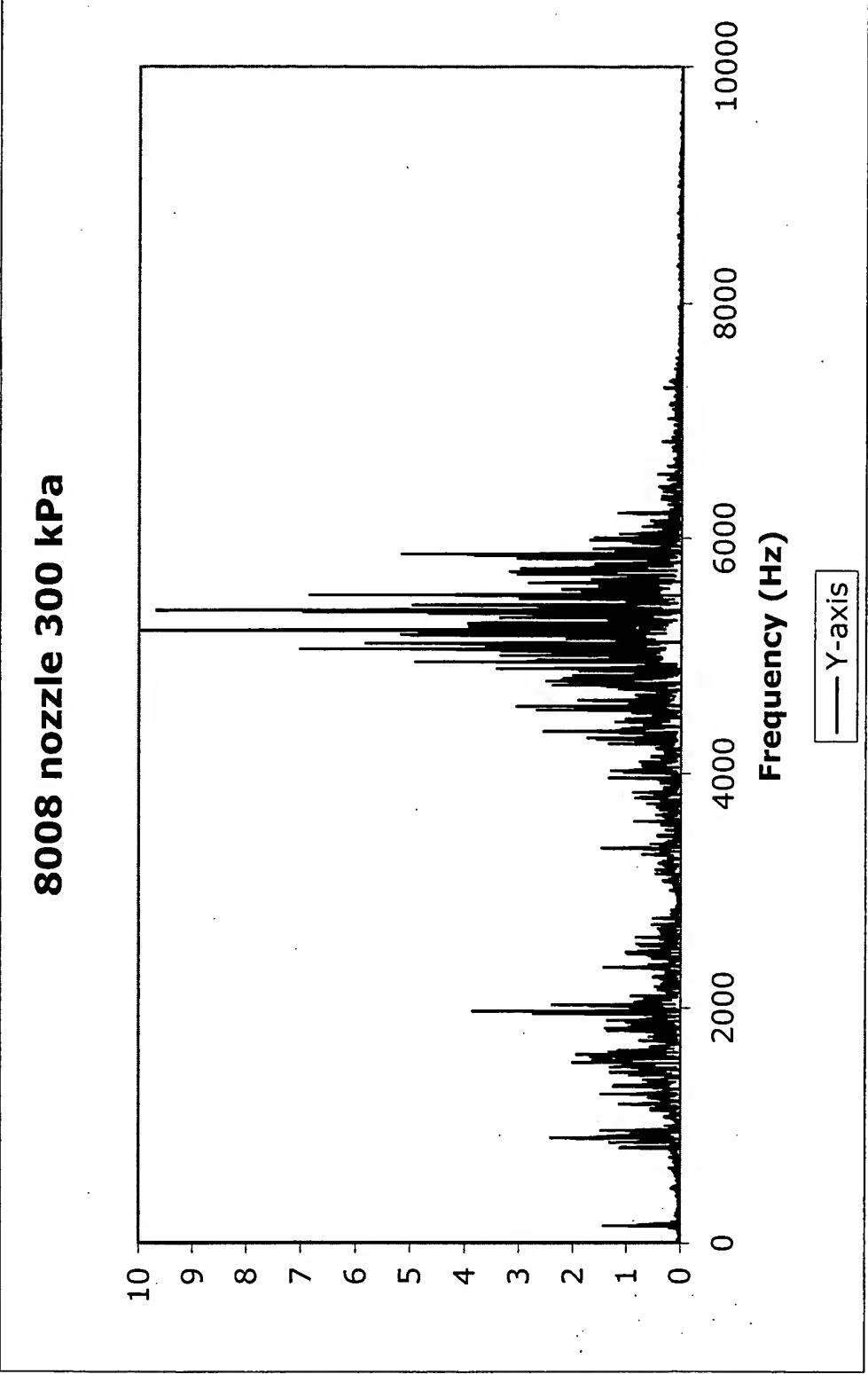


Figure 4Q

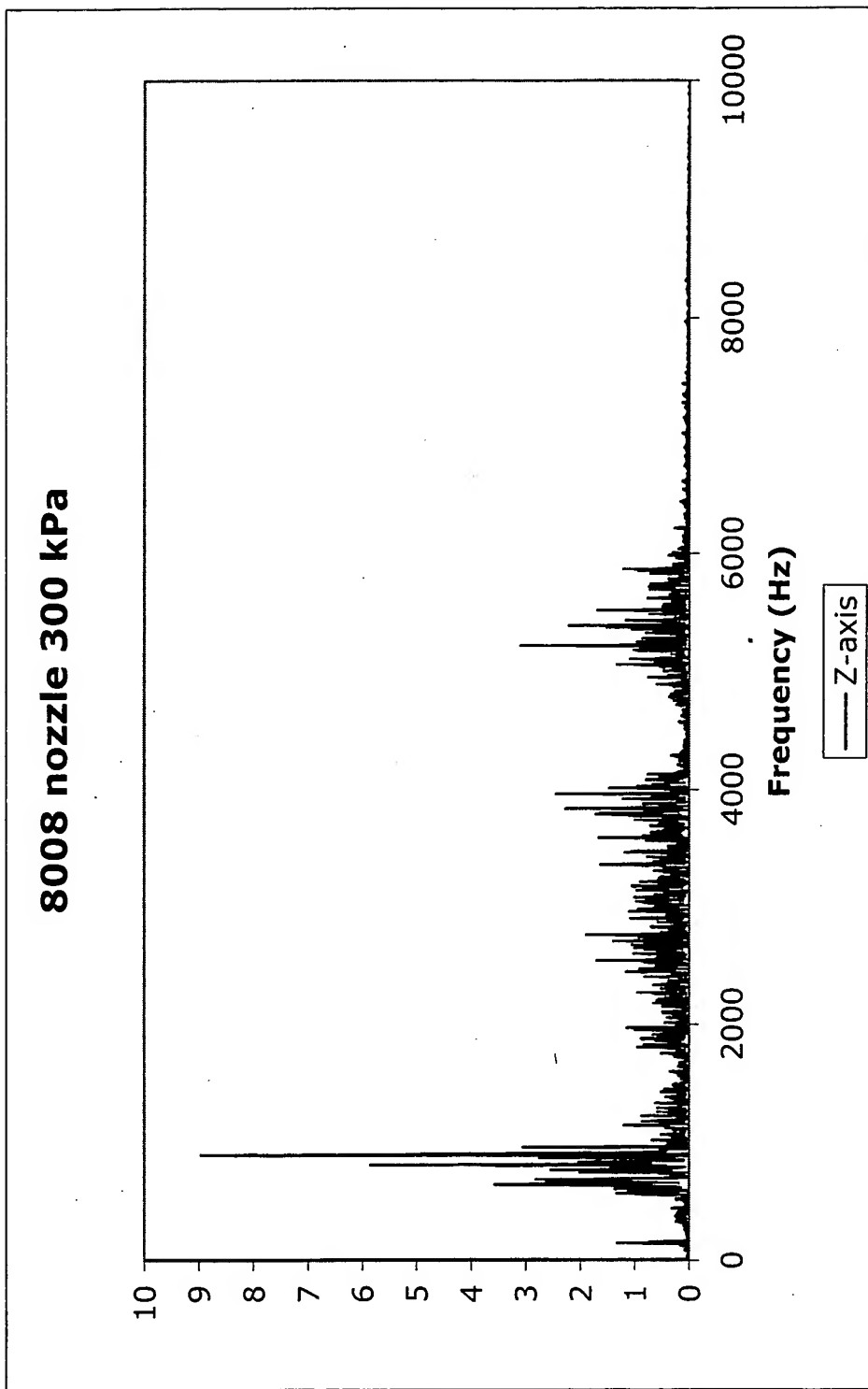


Figure 4R

8001 nozzle 300 kPa

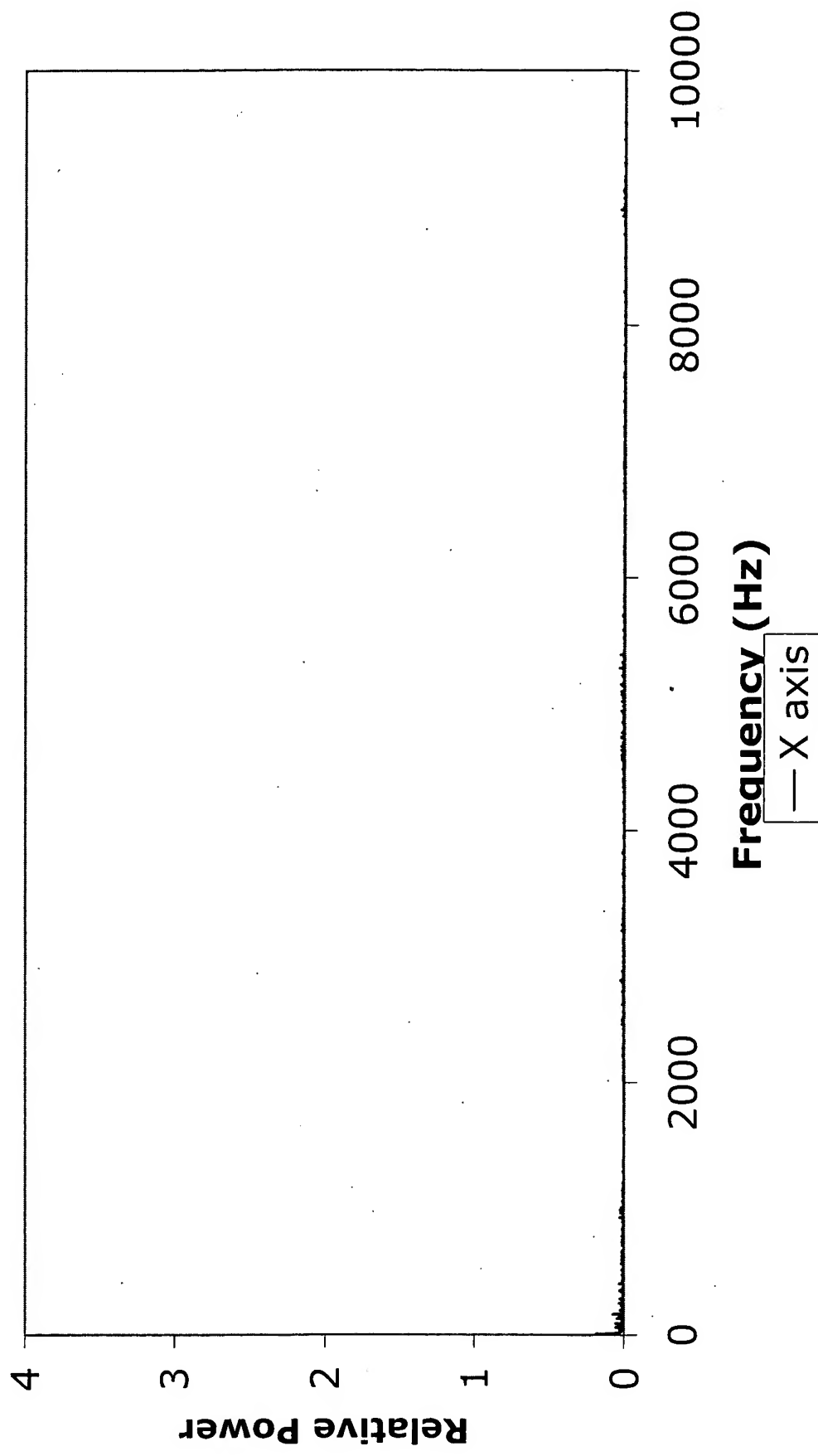
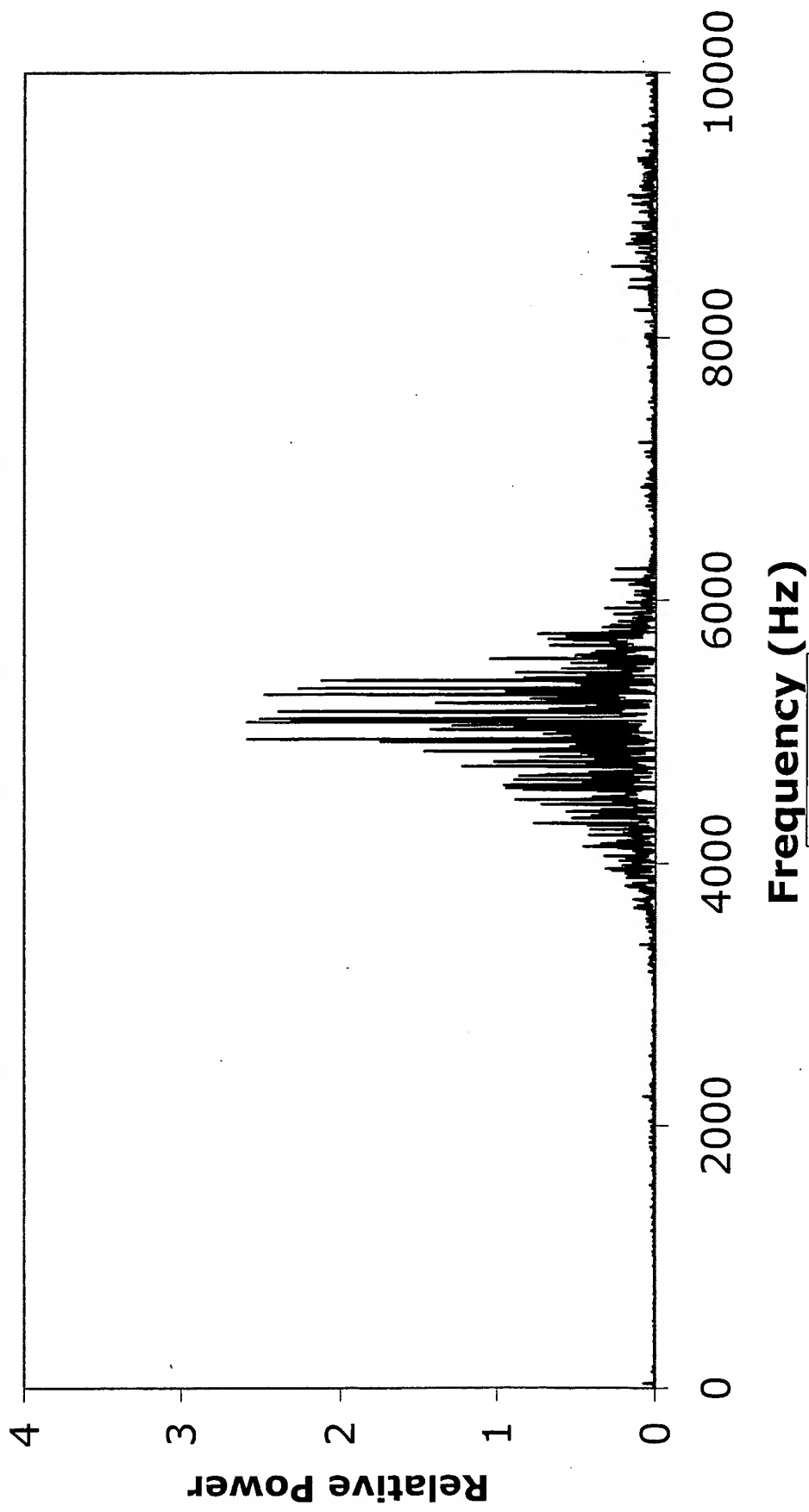


Figure 5A

8001 nozzle 300 kPa



— Y axis

Figure 5B

8001 nozzle at 300 kPa

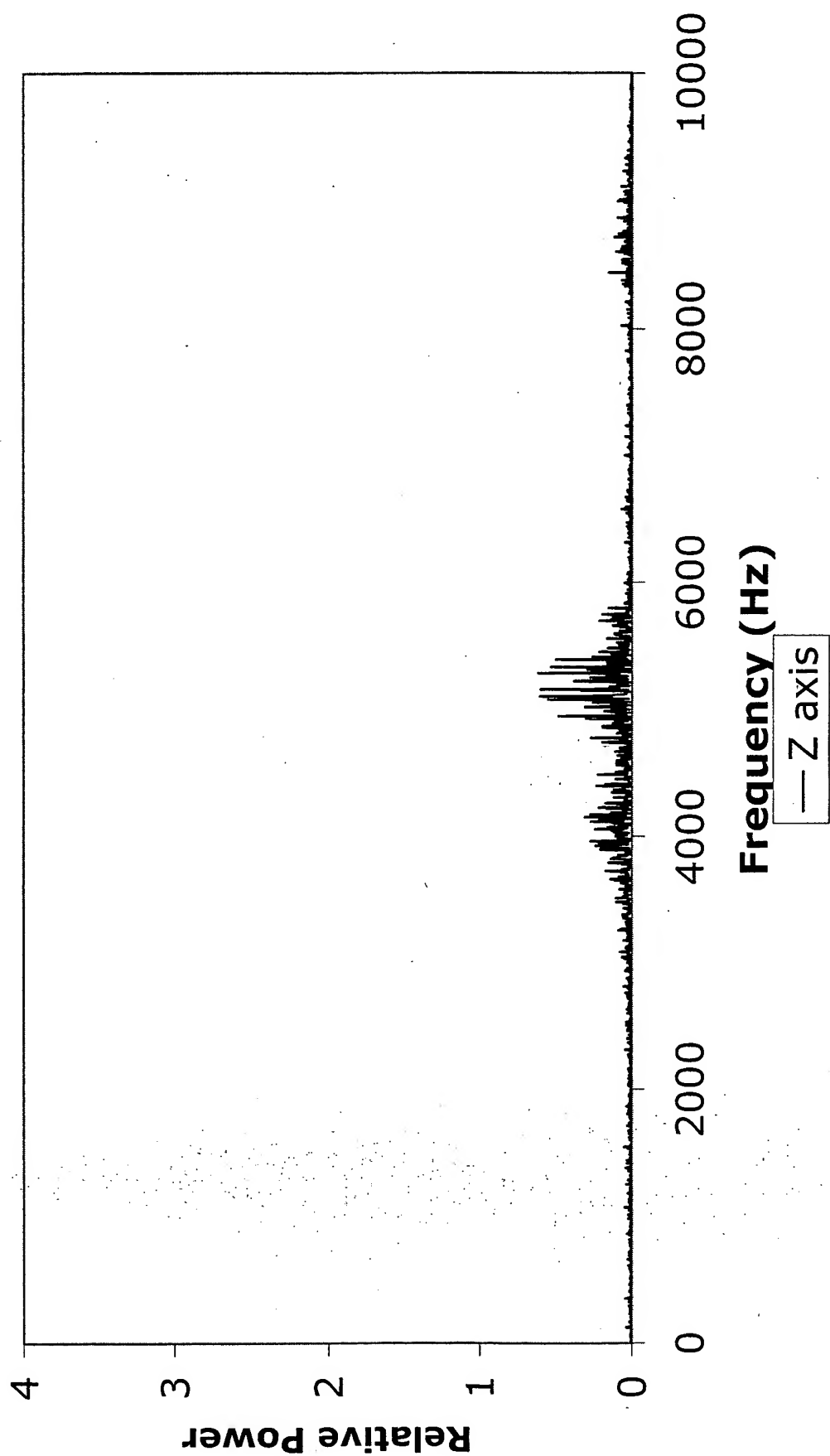
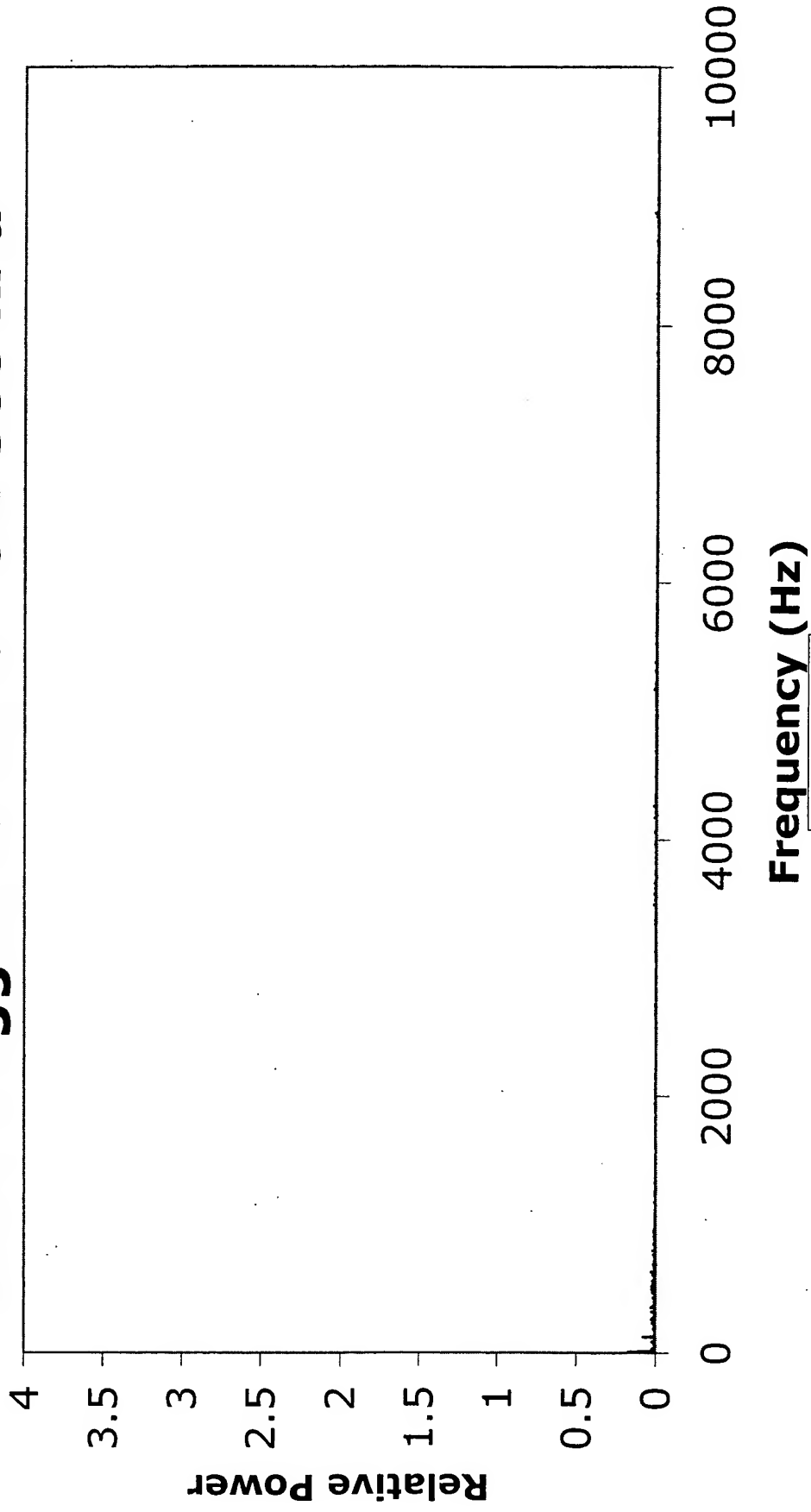


Figure 5C

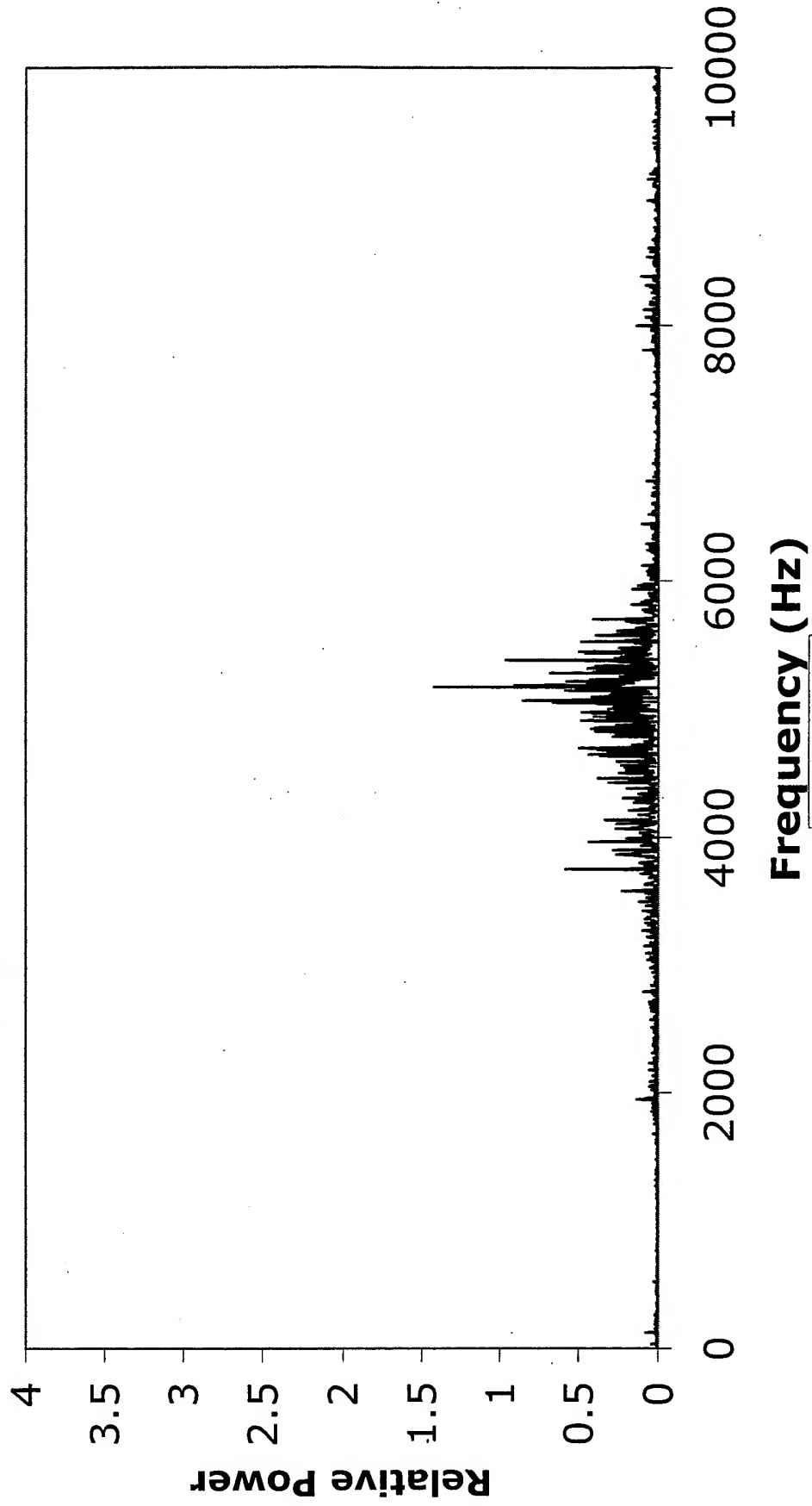
8001 clogged to 87% flow 300 kPa



— X axis

Figure 5D

8001 clogged to 87% flow 300 kPa



—Y axis

Figure 5E

8001 clogged to 87% flow 300 kPa

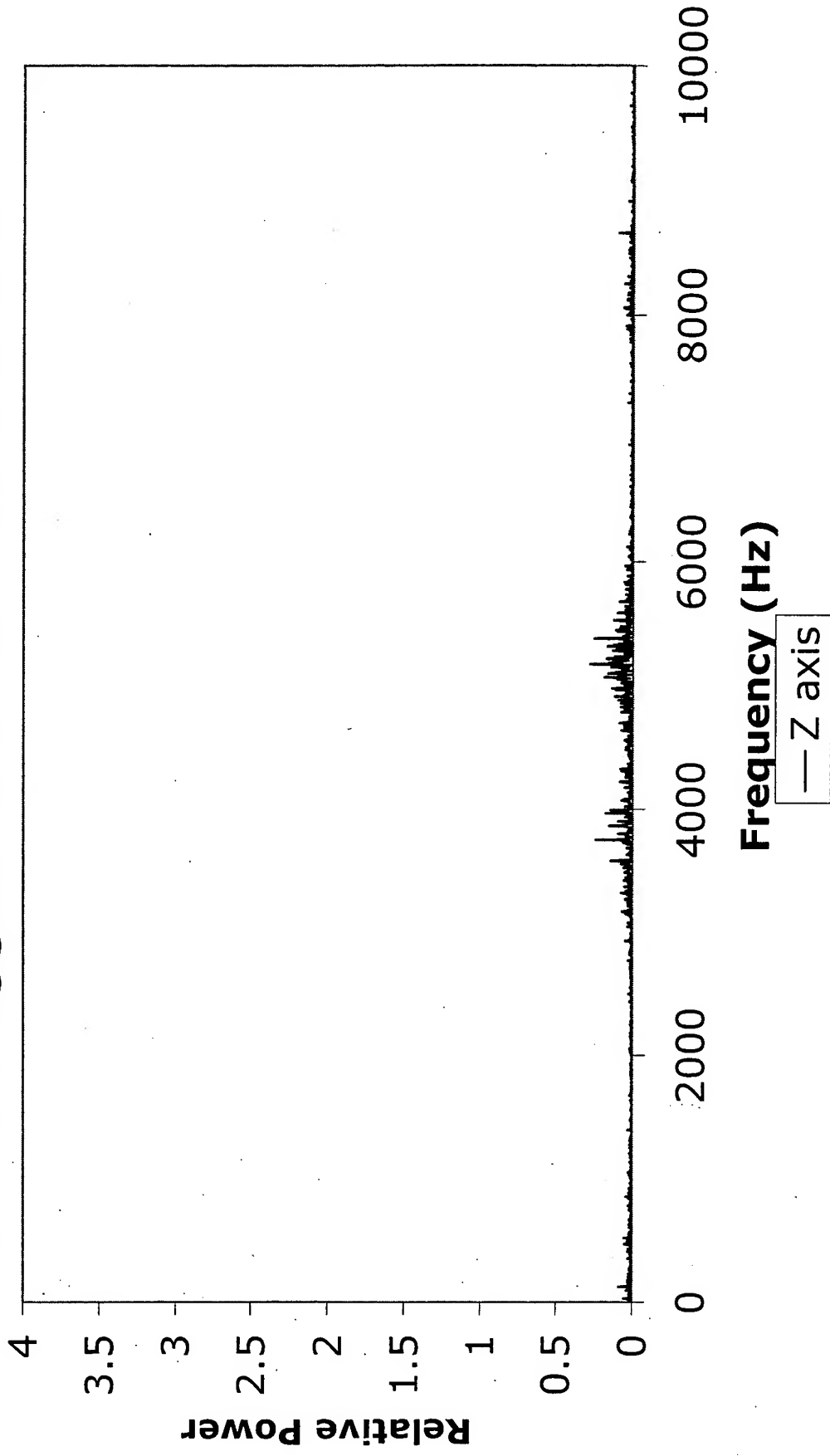
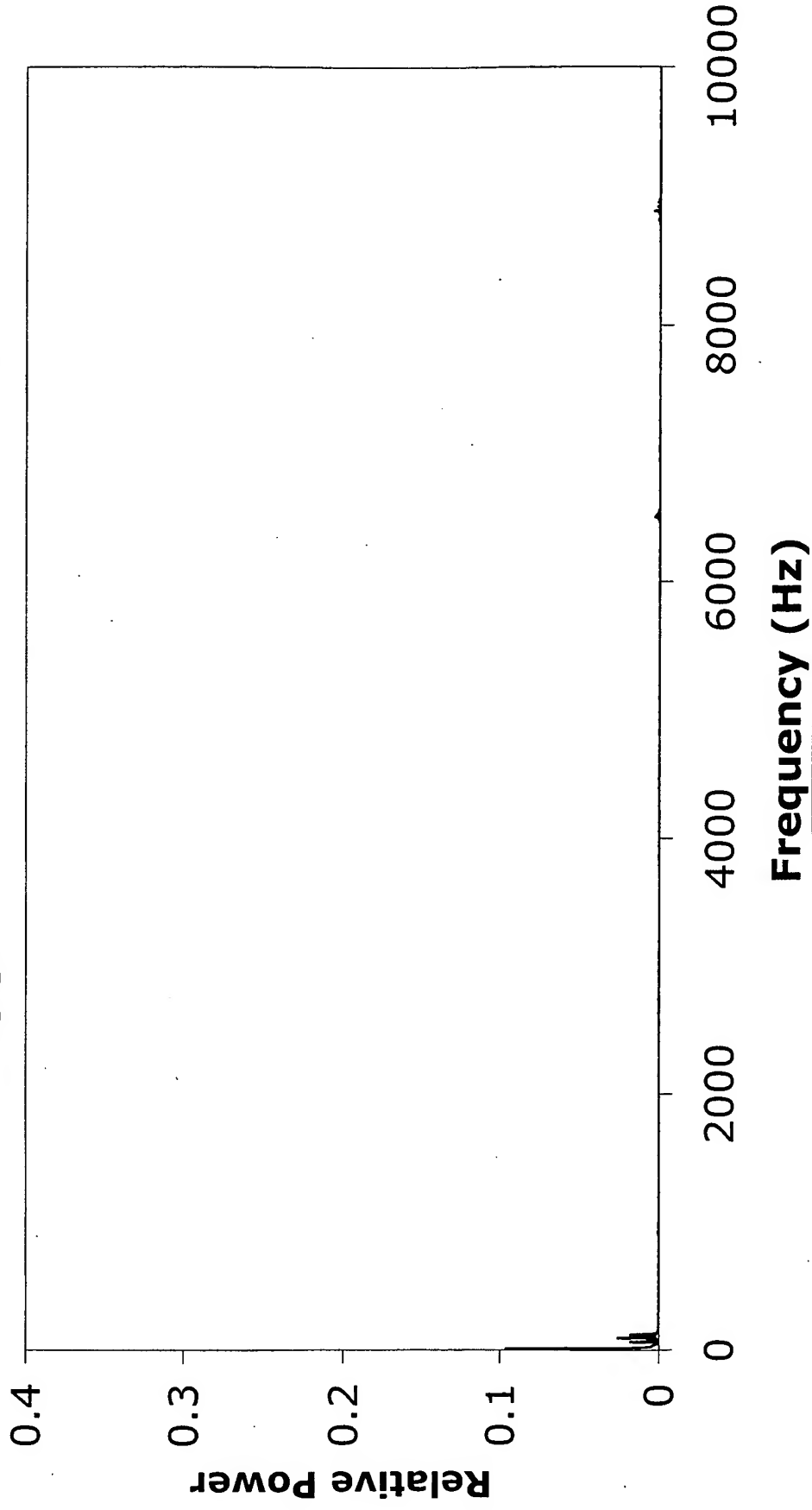


Figure 5F

8001 clogged to 30% flow 300 kPa



— X axis

Figure 5G

8001 clogged to 30% flow 300 kPa

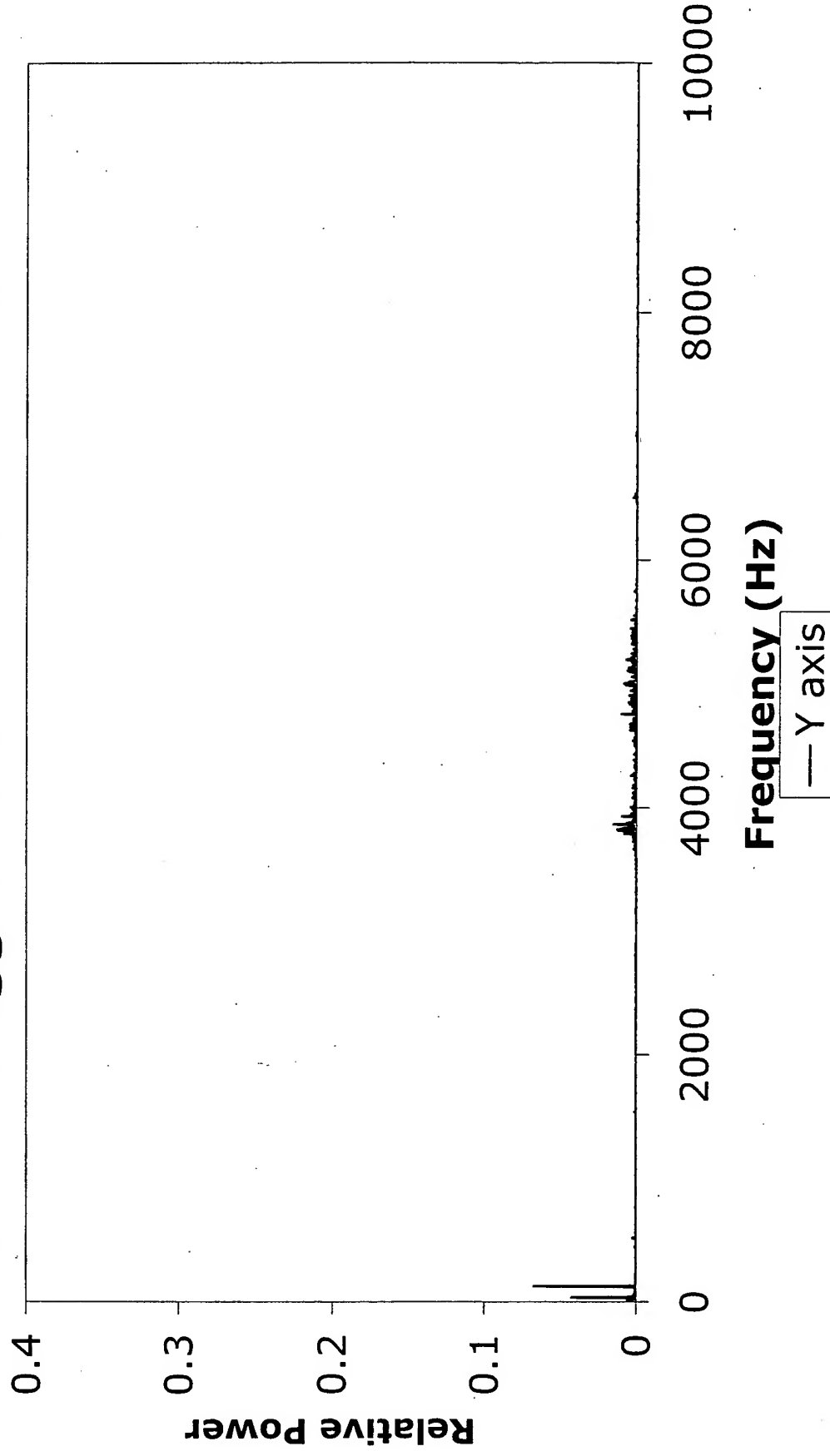
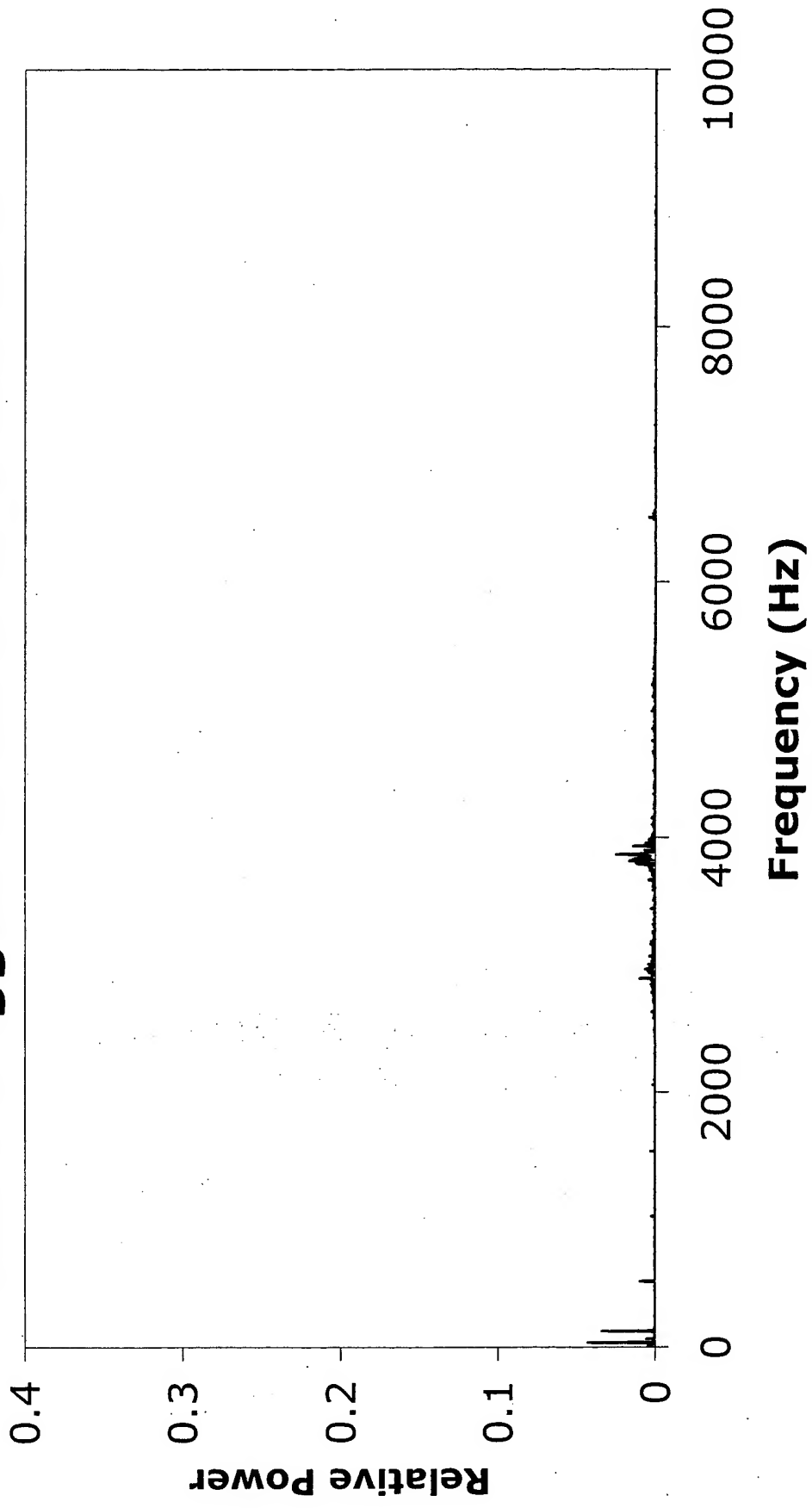


Figure 5H

80001 clogged to 30% flow 300 kPa



— Z axis

Figure 5I

8004 normal flow 300 kPa

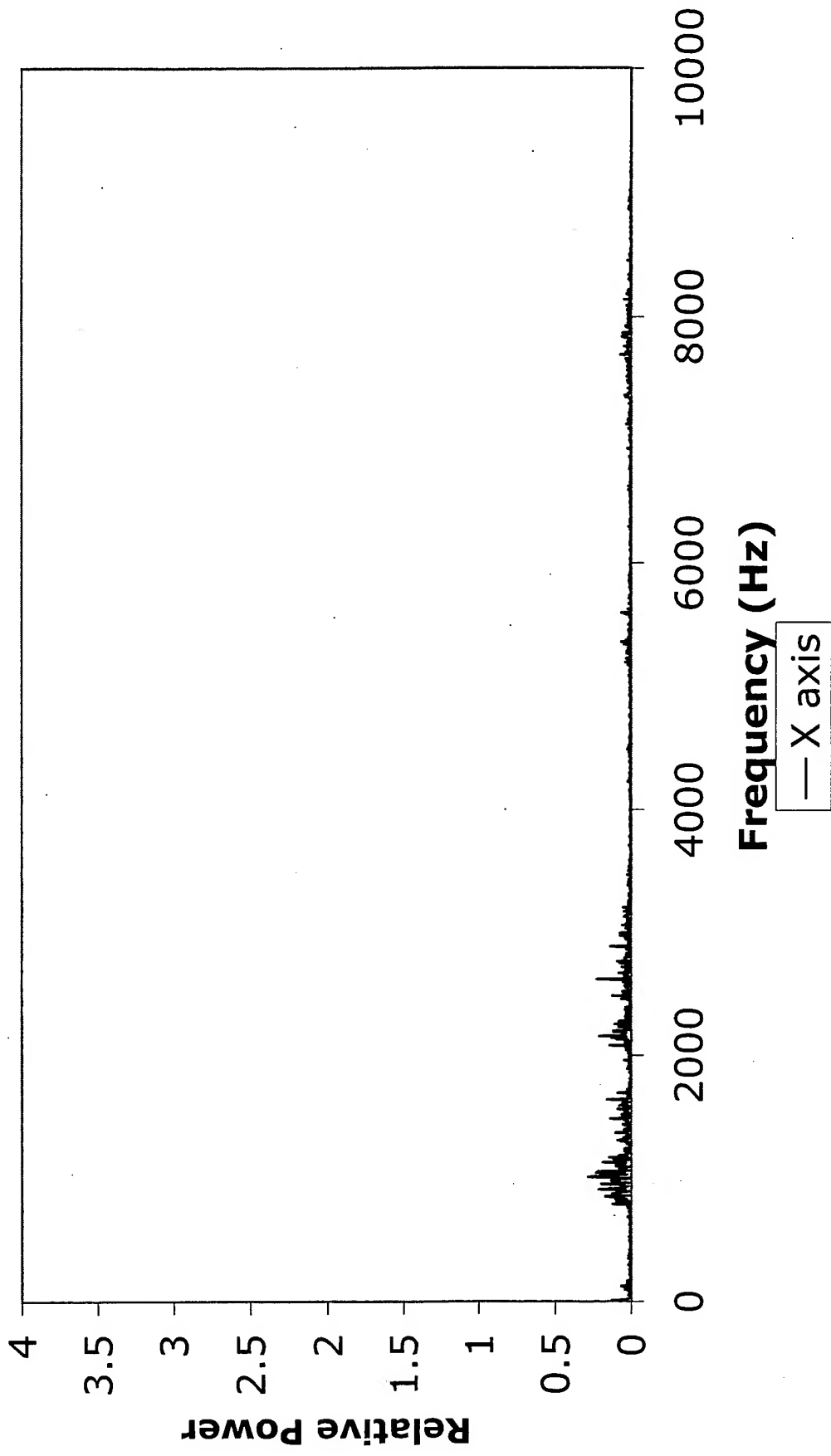


Figure 5J

8004 normal flow 300 kPa

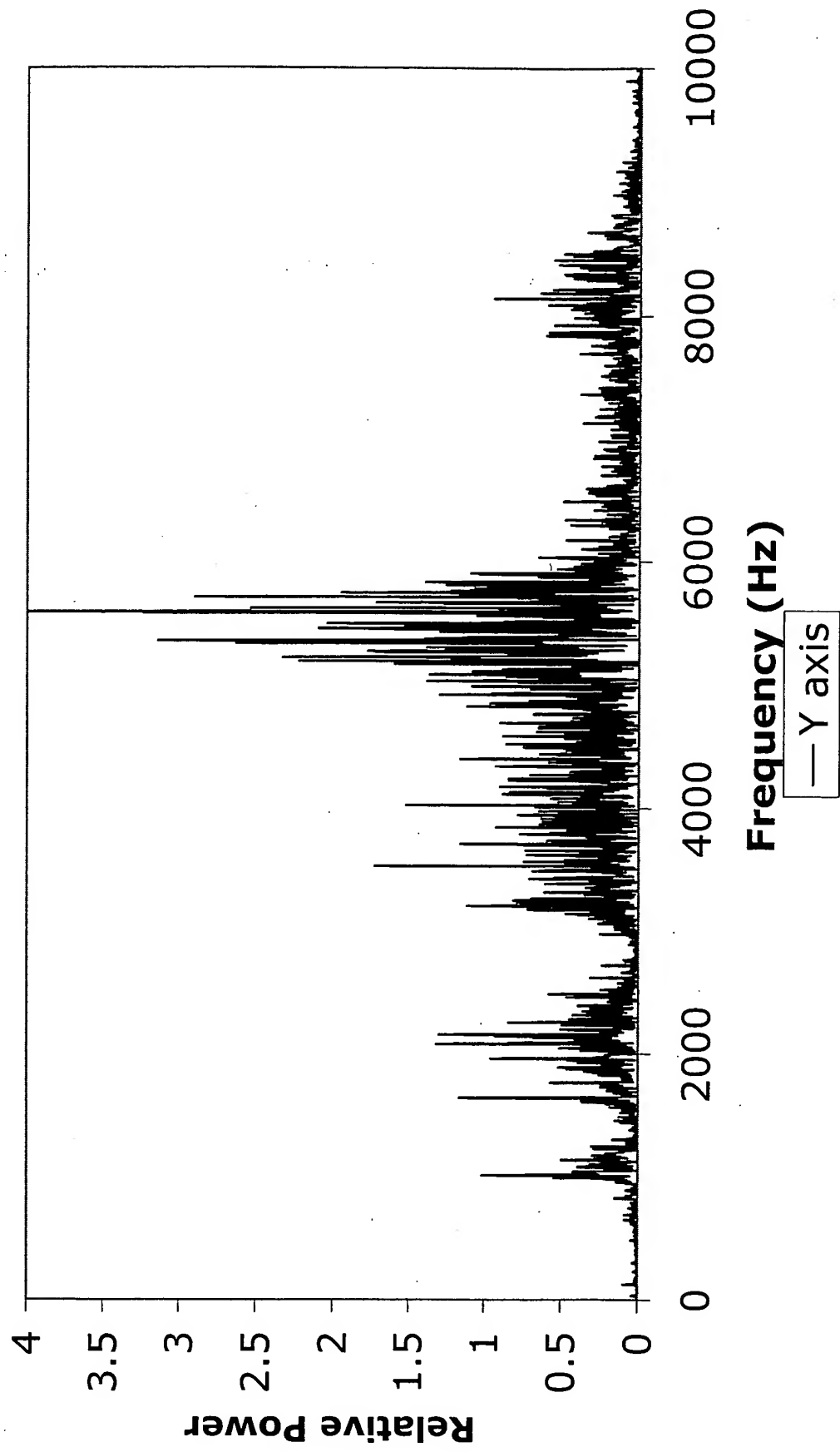
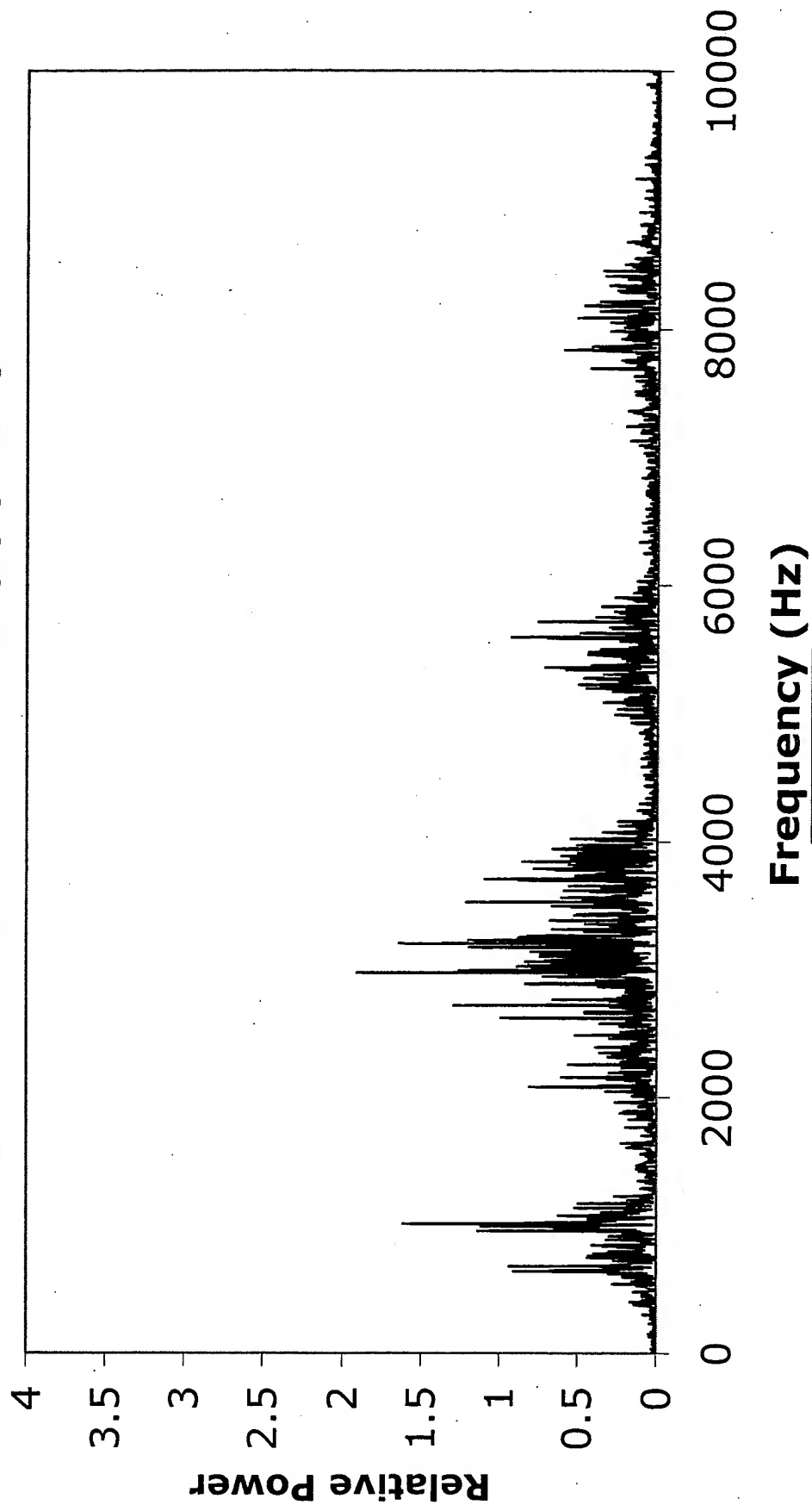


Figure 5K

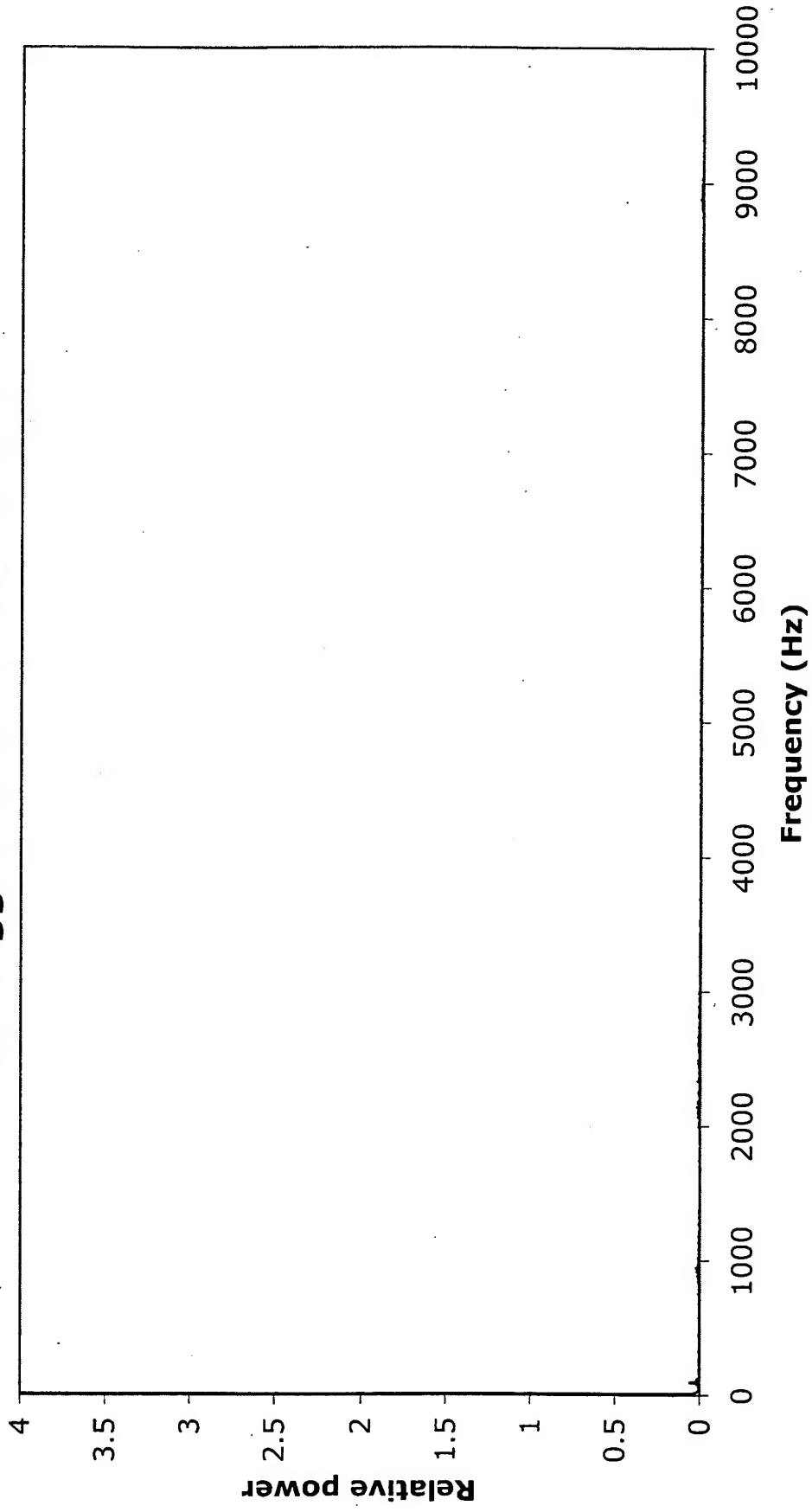
8004 normal flow 300 kPa



— Z axis

Figure 5L

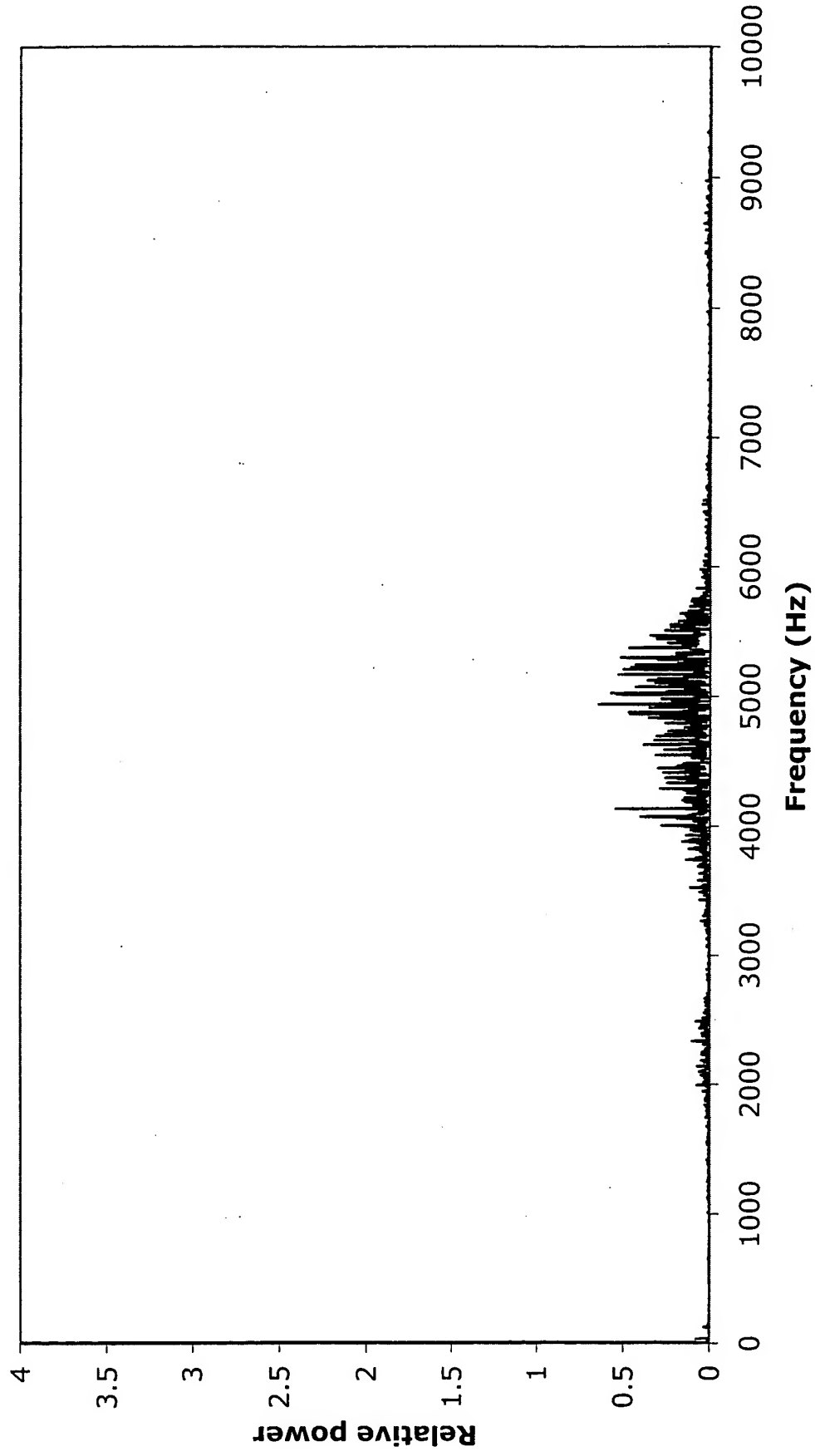
8004 clogged to 62% flow 30 kPa



— X-axis

Figure 5M

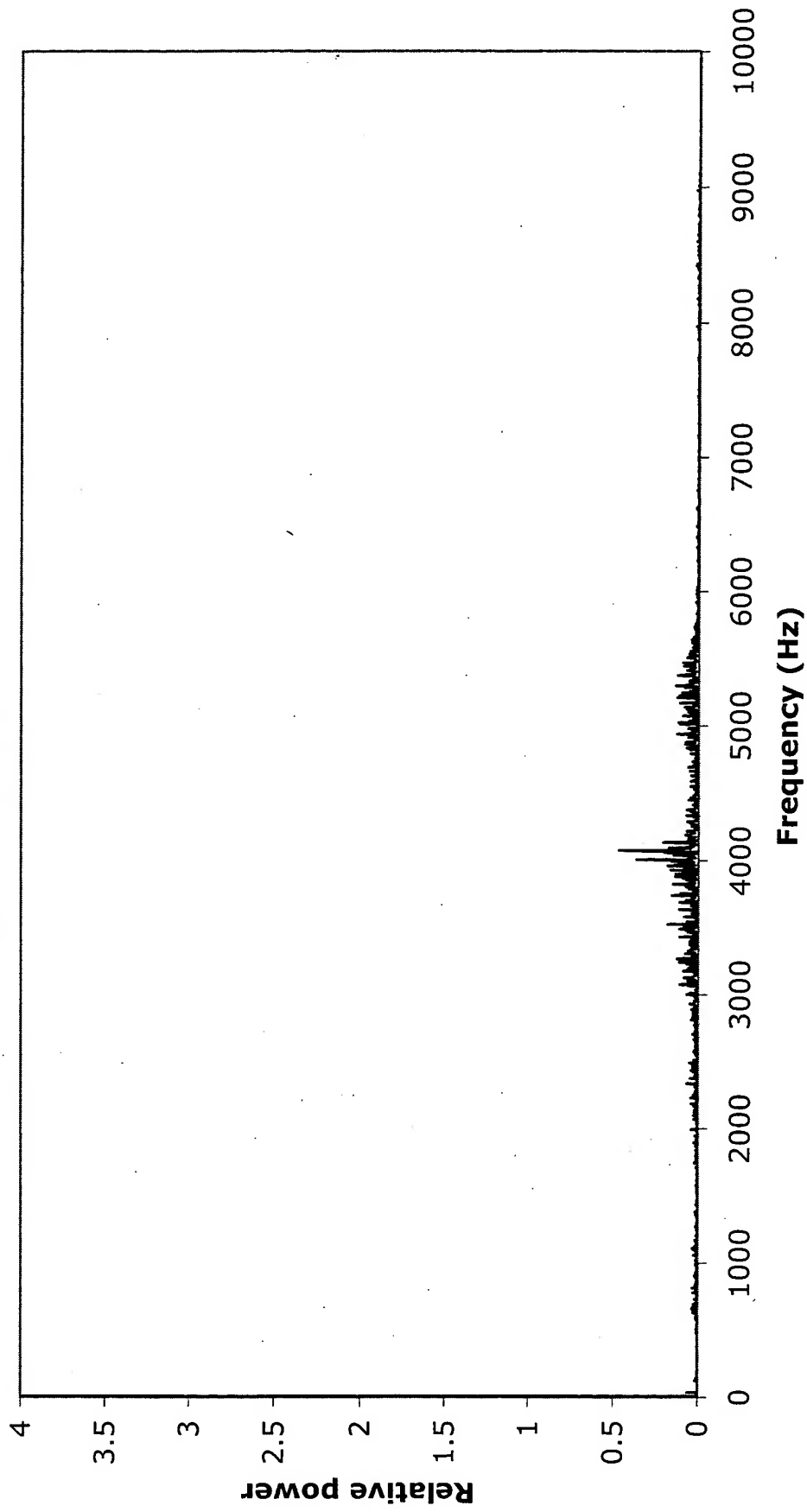
8004 clogged to 62% flow 30 kPa



— Y-axis

Figure 5N

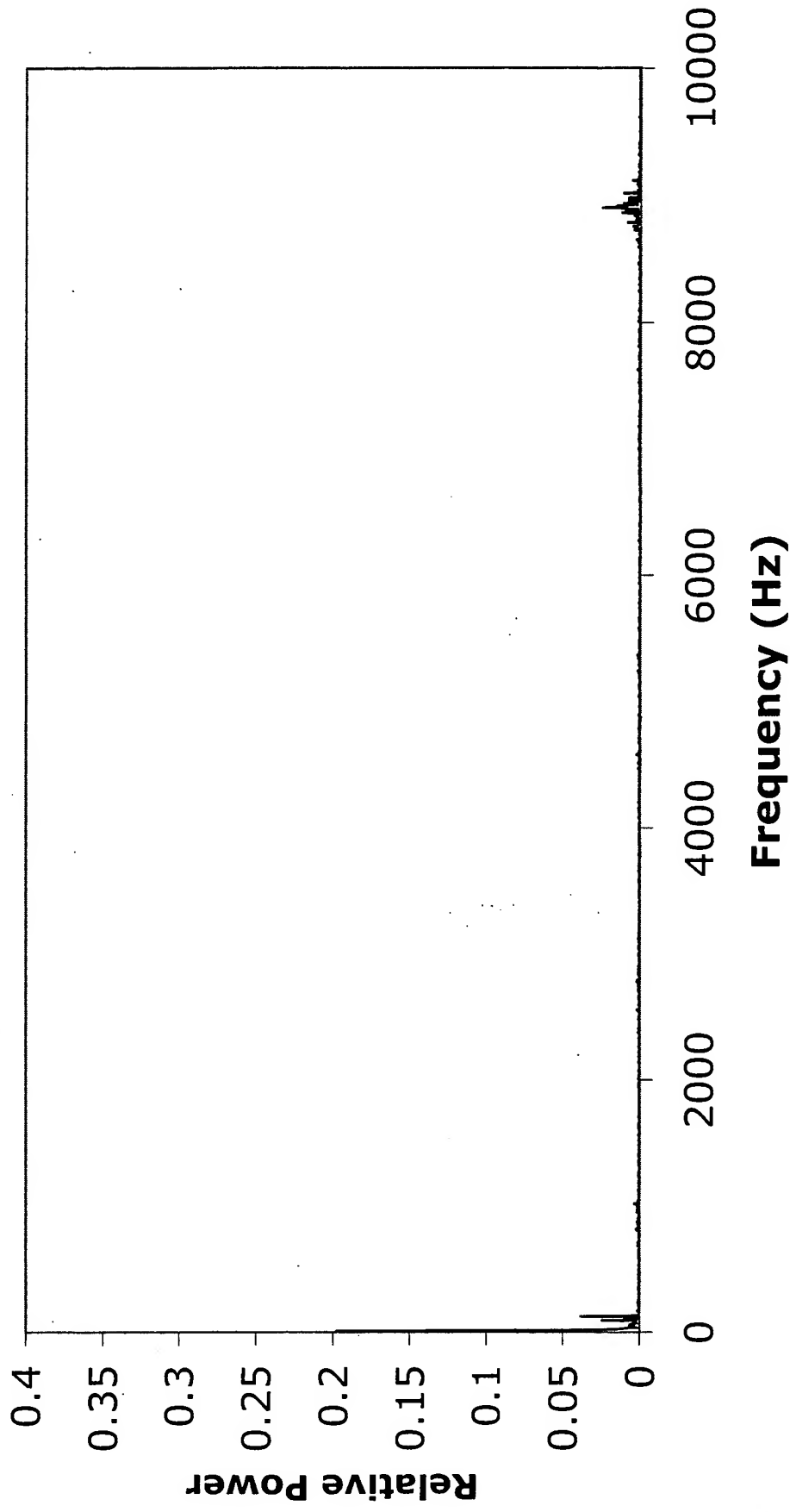
8004 clogged to 62% flow 30 kPa



— Z-axis

Figure 50

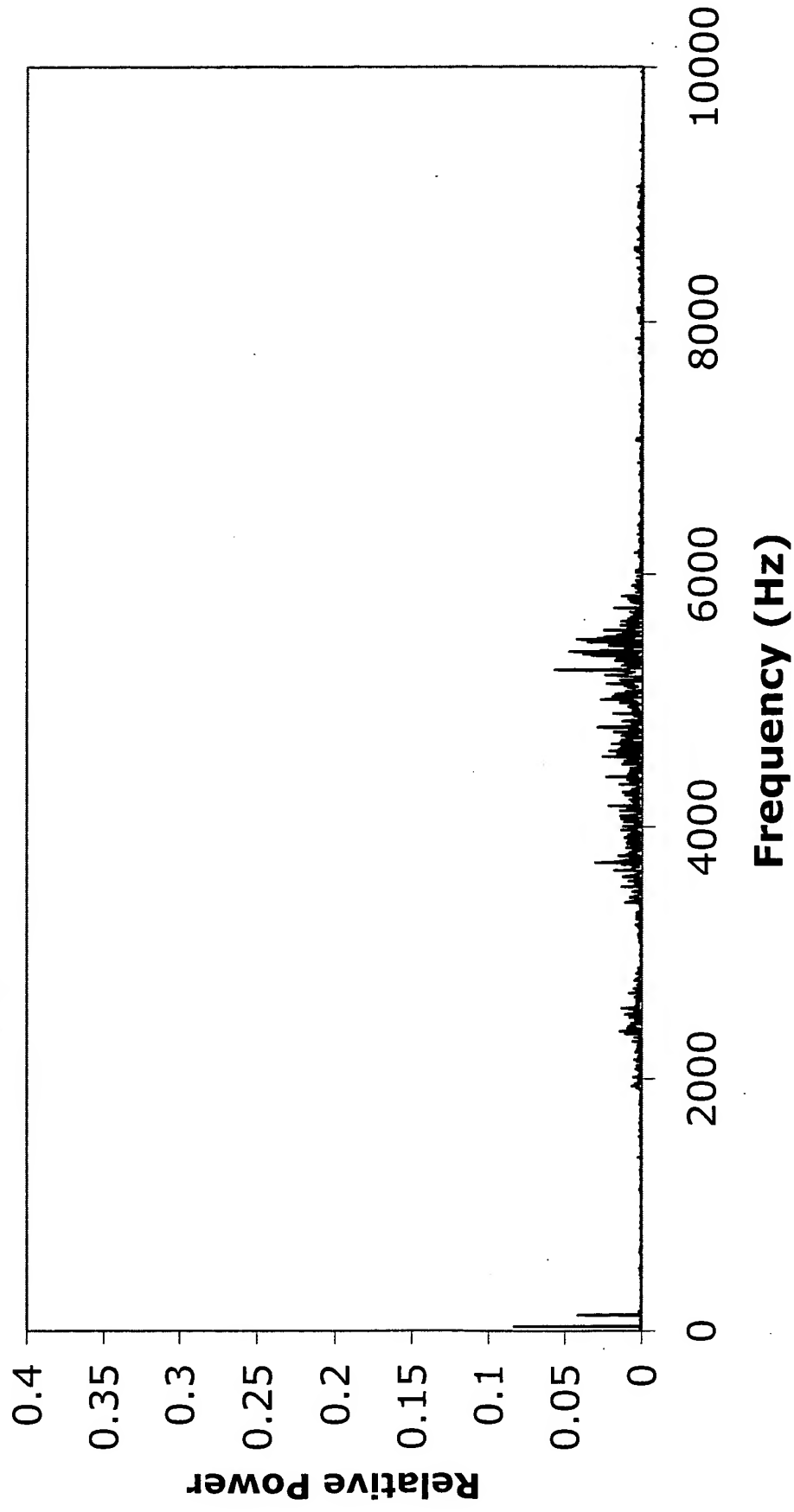
8004 clogged to 33% flow 300 kPa



— X axis

Figure 5P

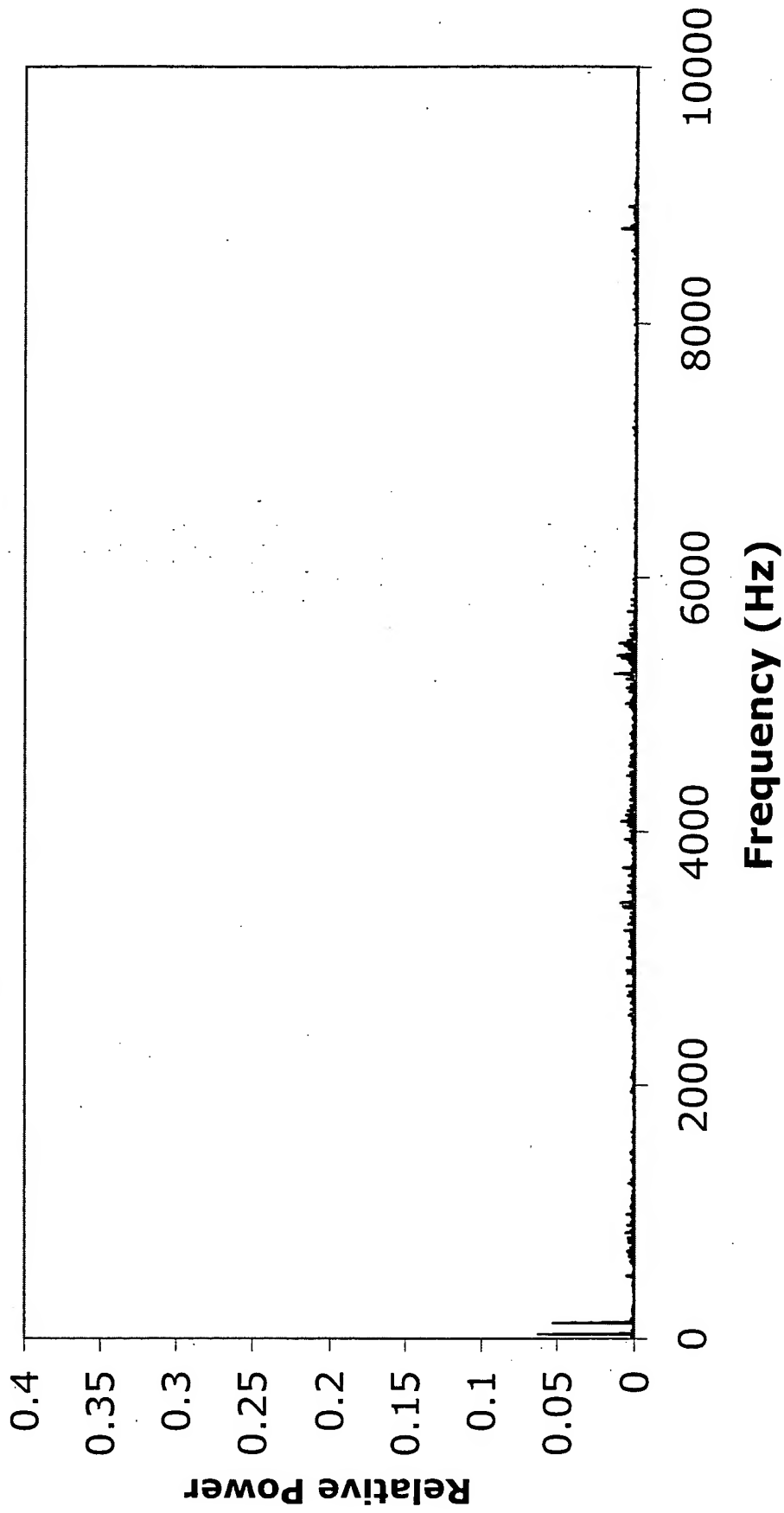
8004 clogged to 33% flow 300 kPa



— Y axis

Figure 5Q

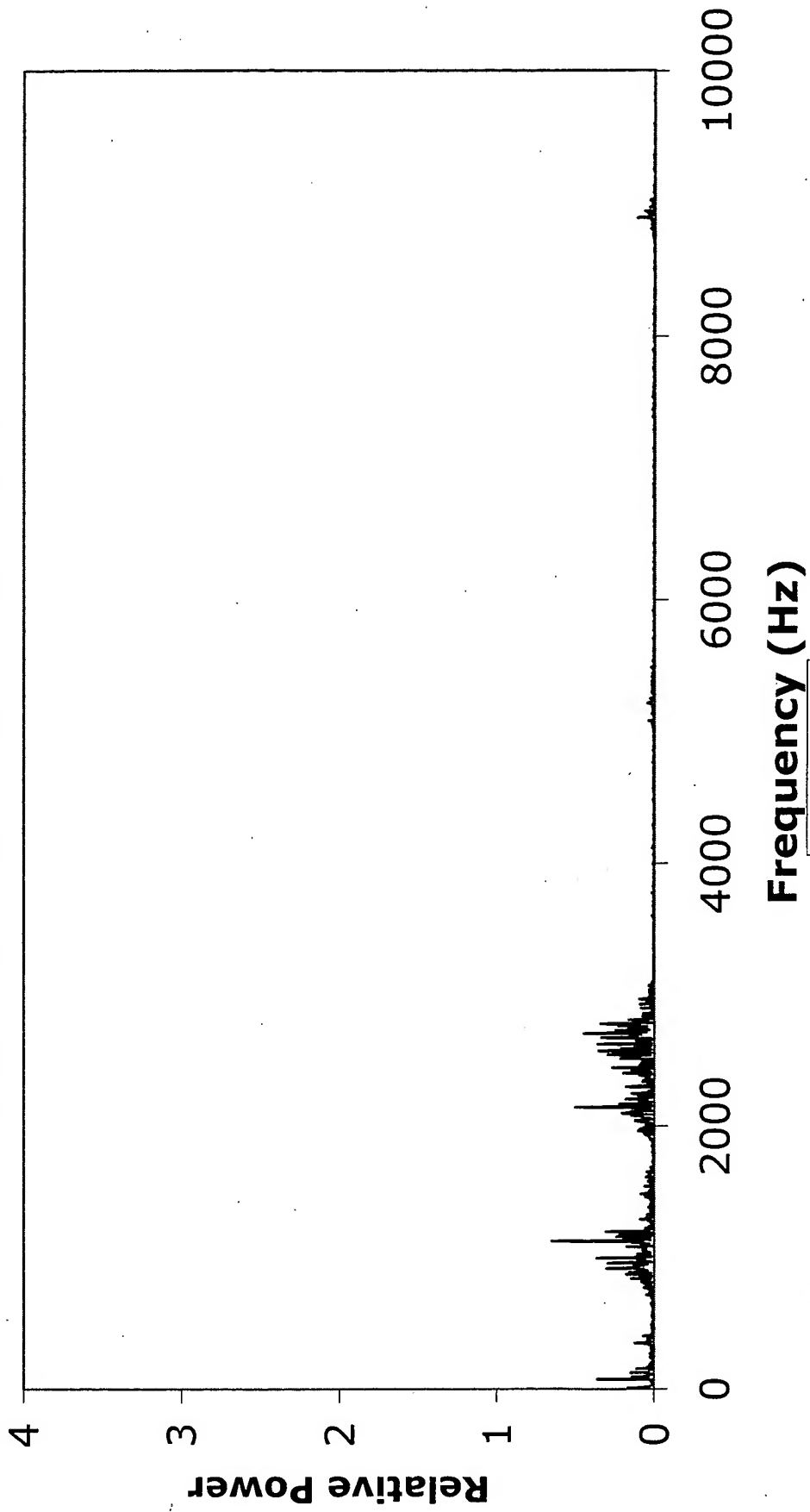
8004 clogged to 33% flow 300 kPa



— Z axis

Figure 5R

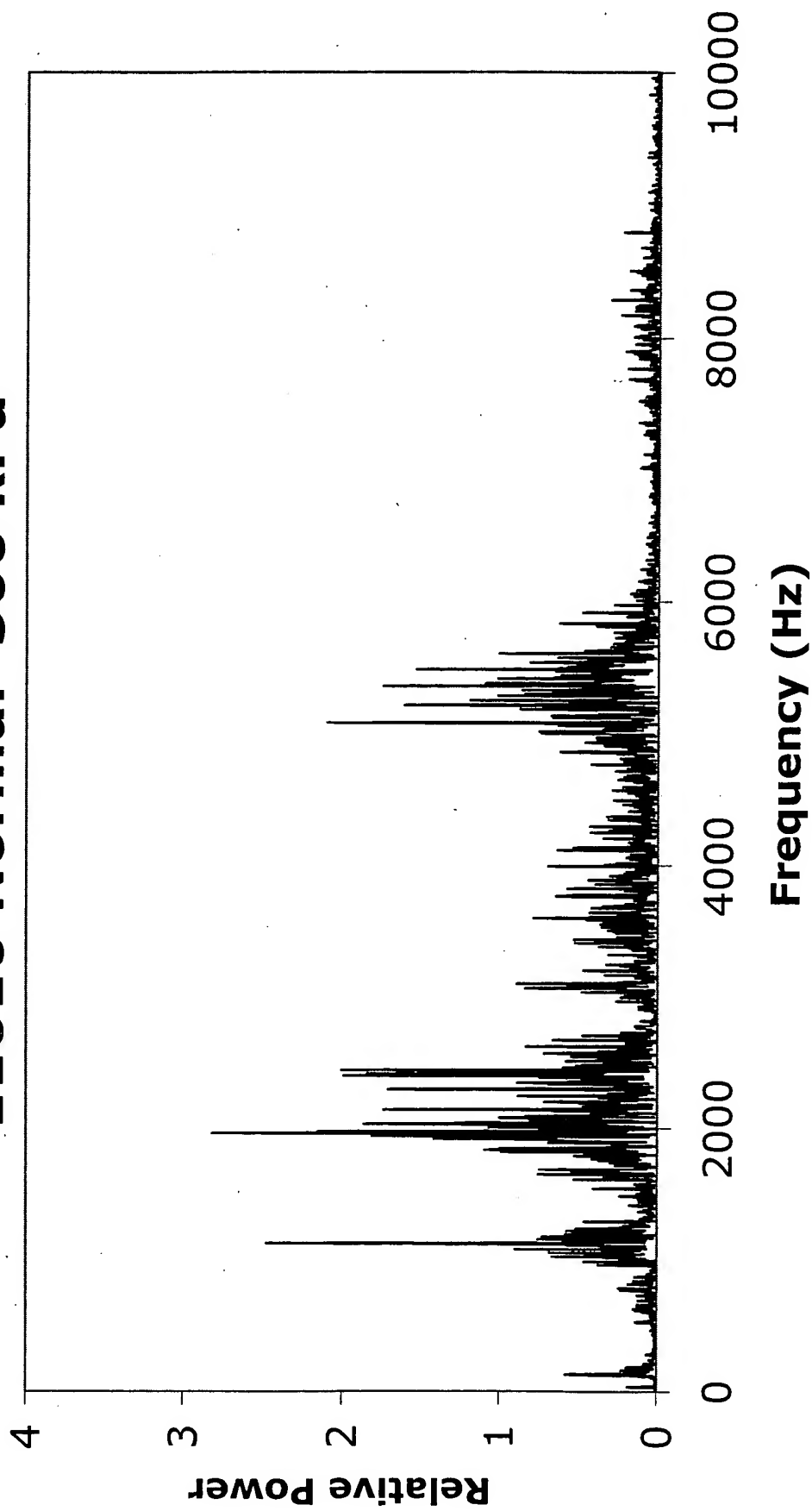
11010 Normal 300 kPa



— X axis

Figure 6A

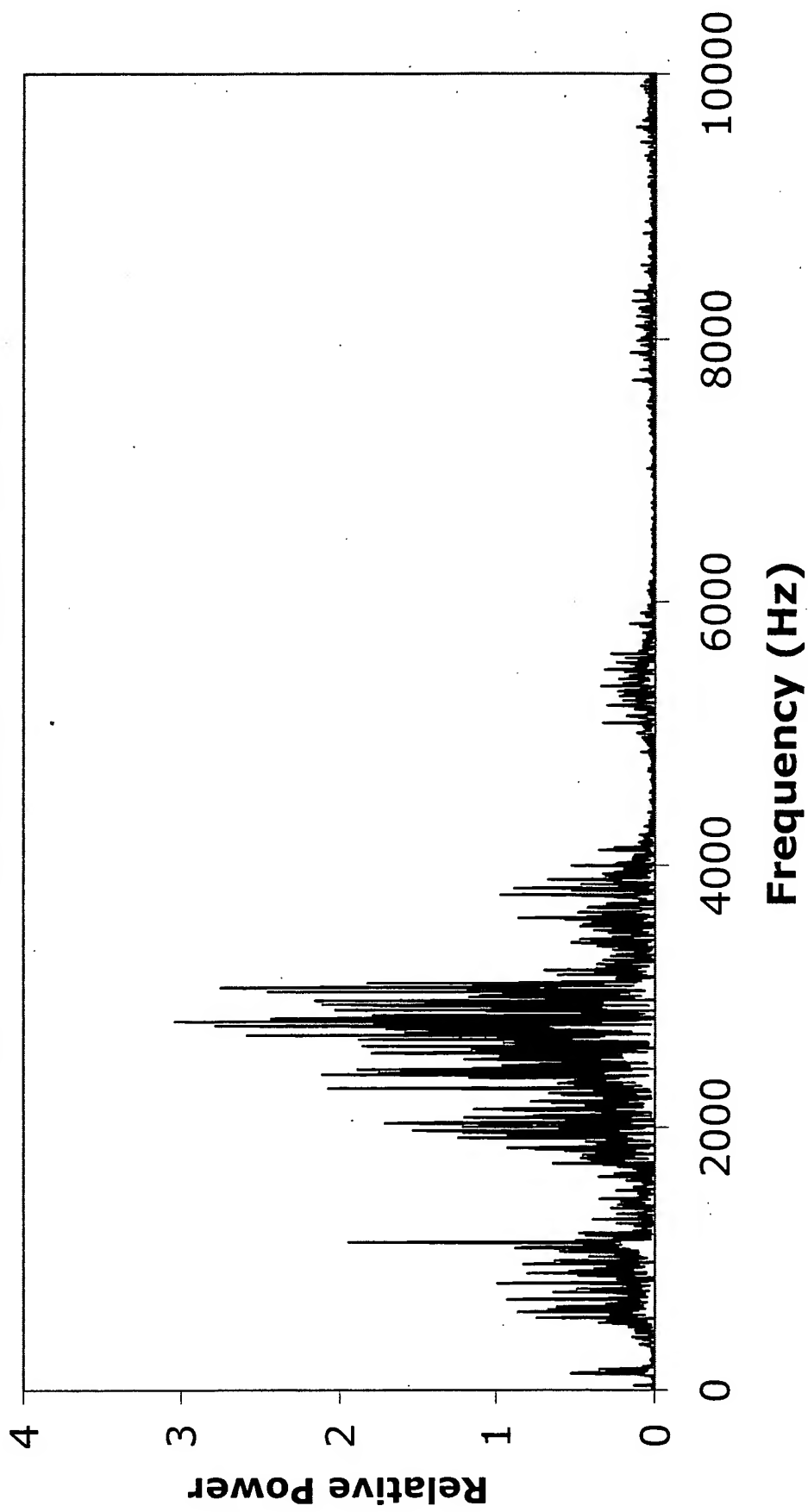
11010 Normal 300 kPa



— Y axis

Figure 6B

11010 Normal 300 kPa



— Z axis

Figure 6C

11010 clogged to 73% flow 300kPa

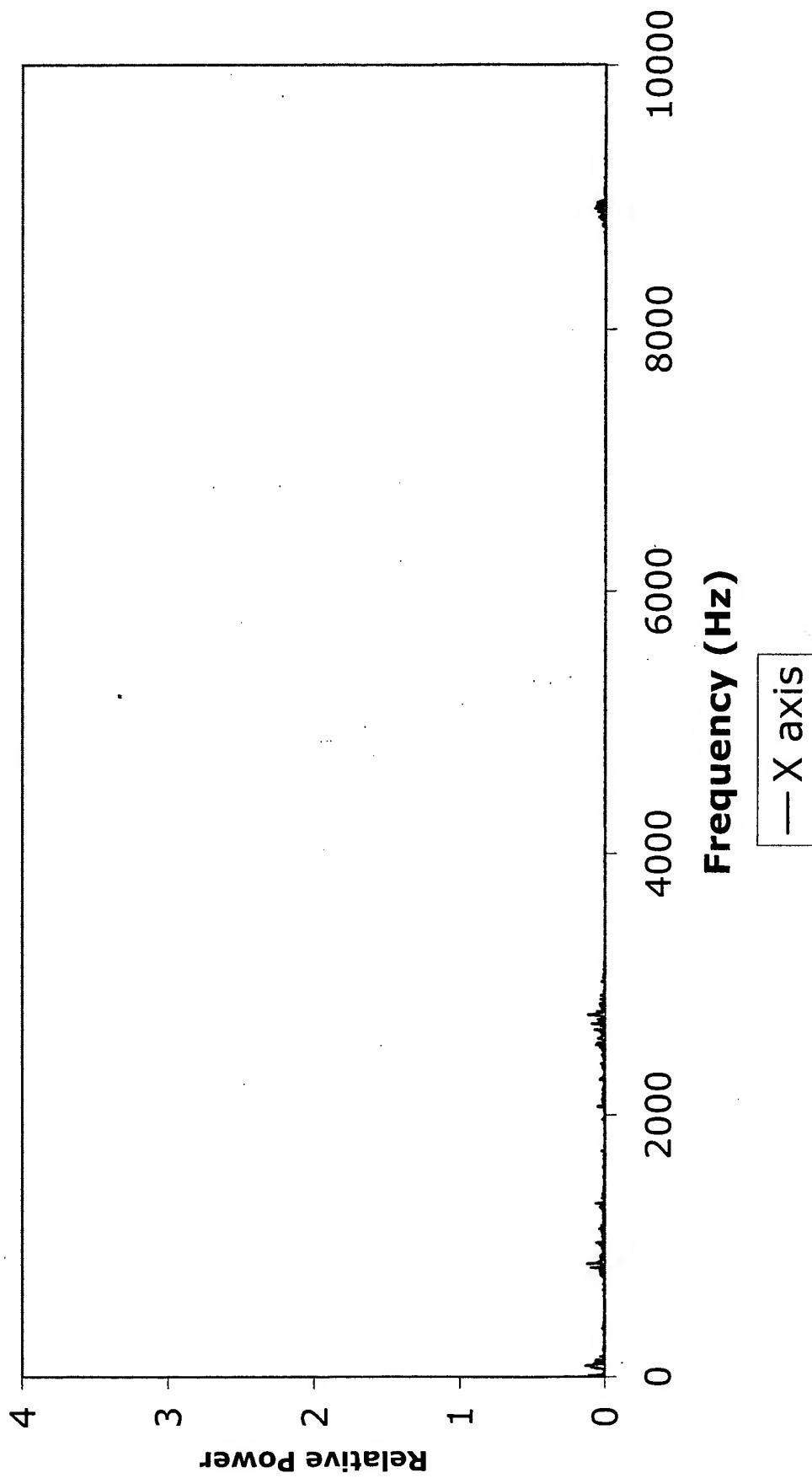


Figure 6D

11010 clogged to 73% flow 300kPa

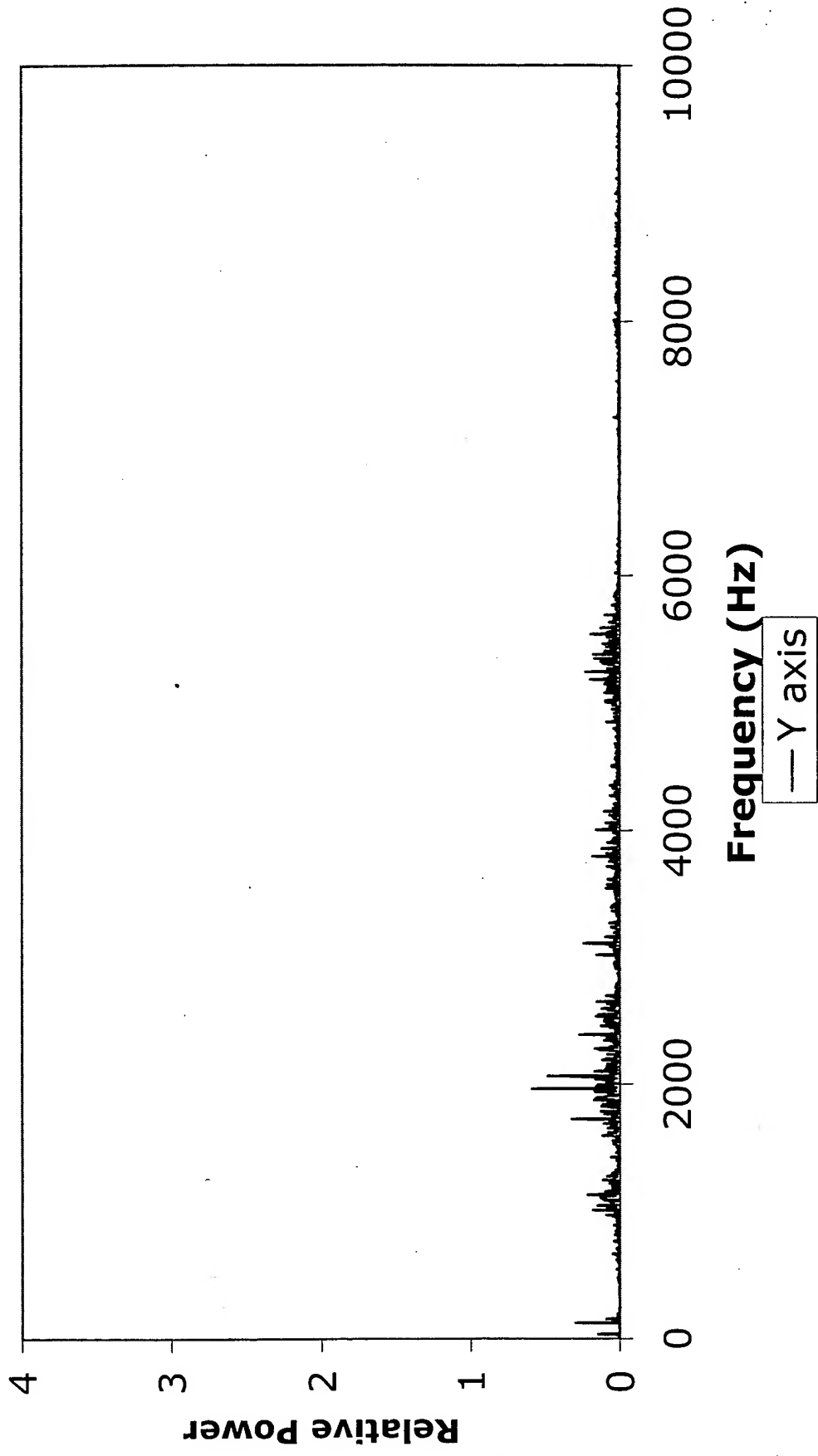


Figure 6E

11010 clogged to 73% flow 300kPa

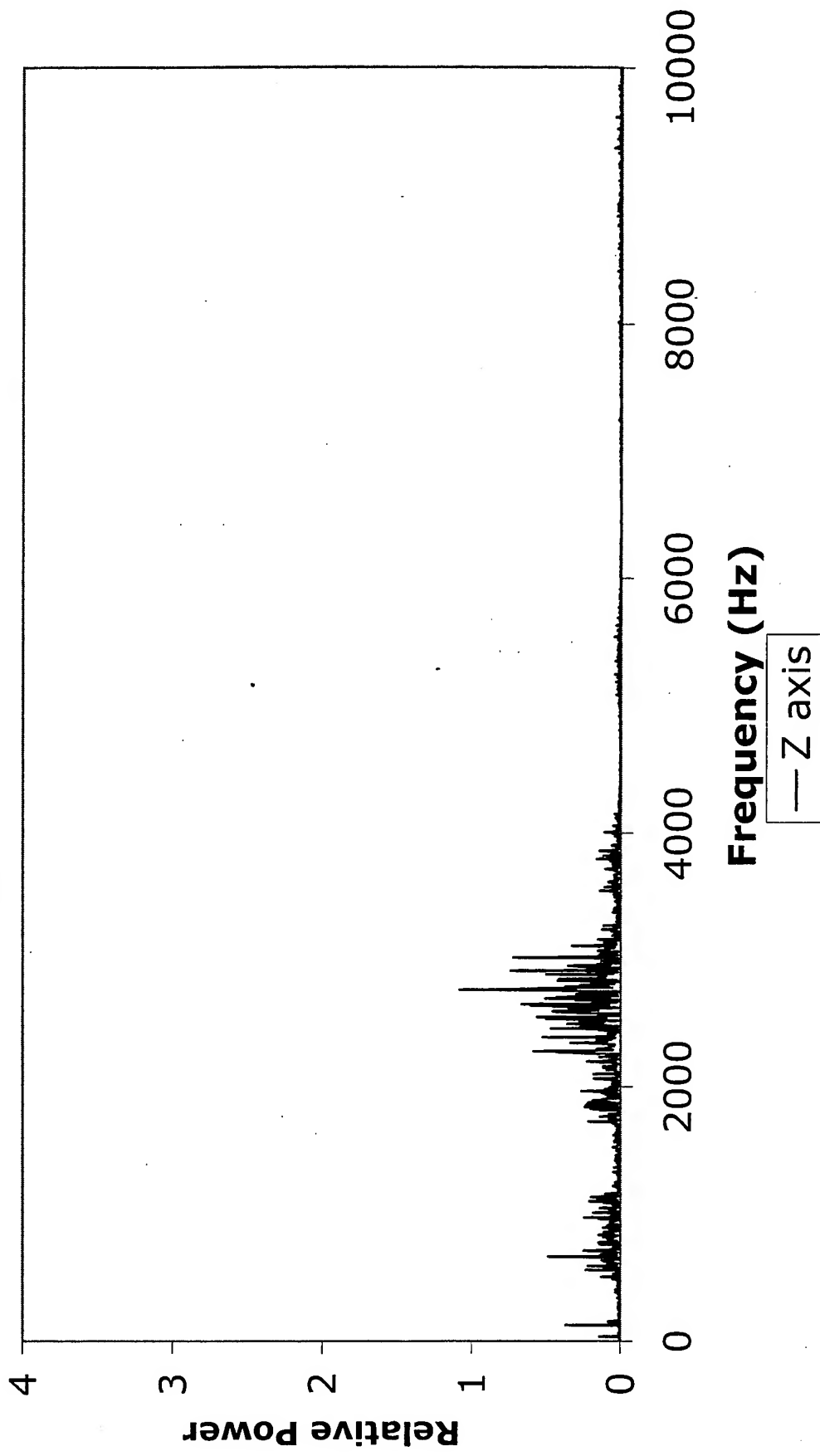


Figure 6F

11010 clogged to 52% flow 300 kPa

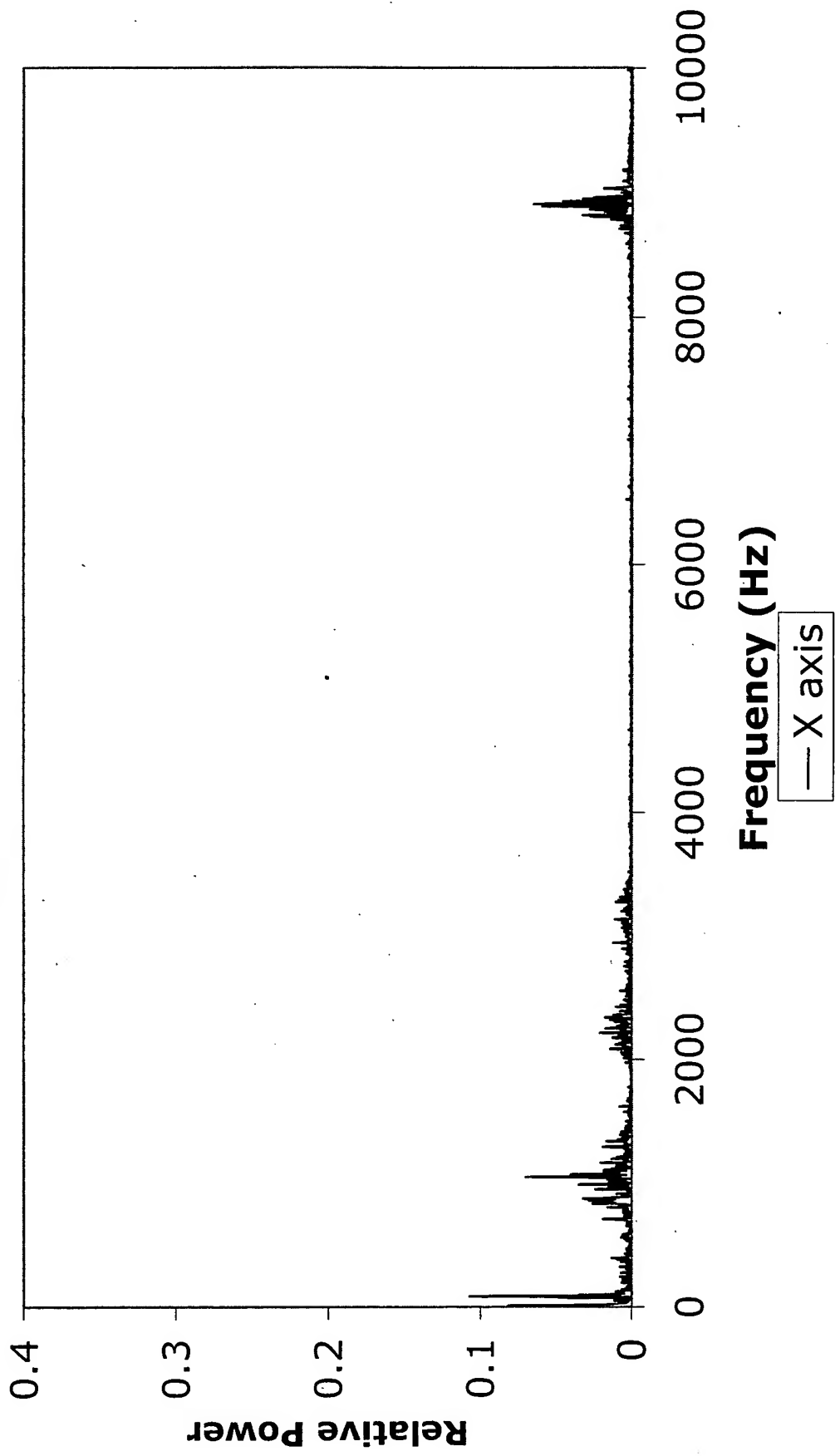
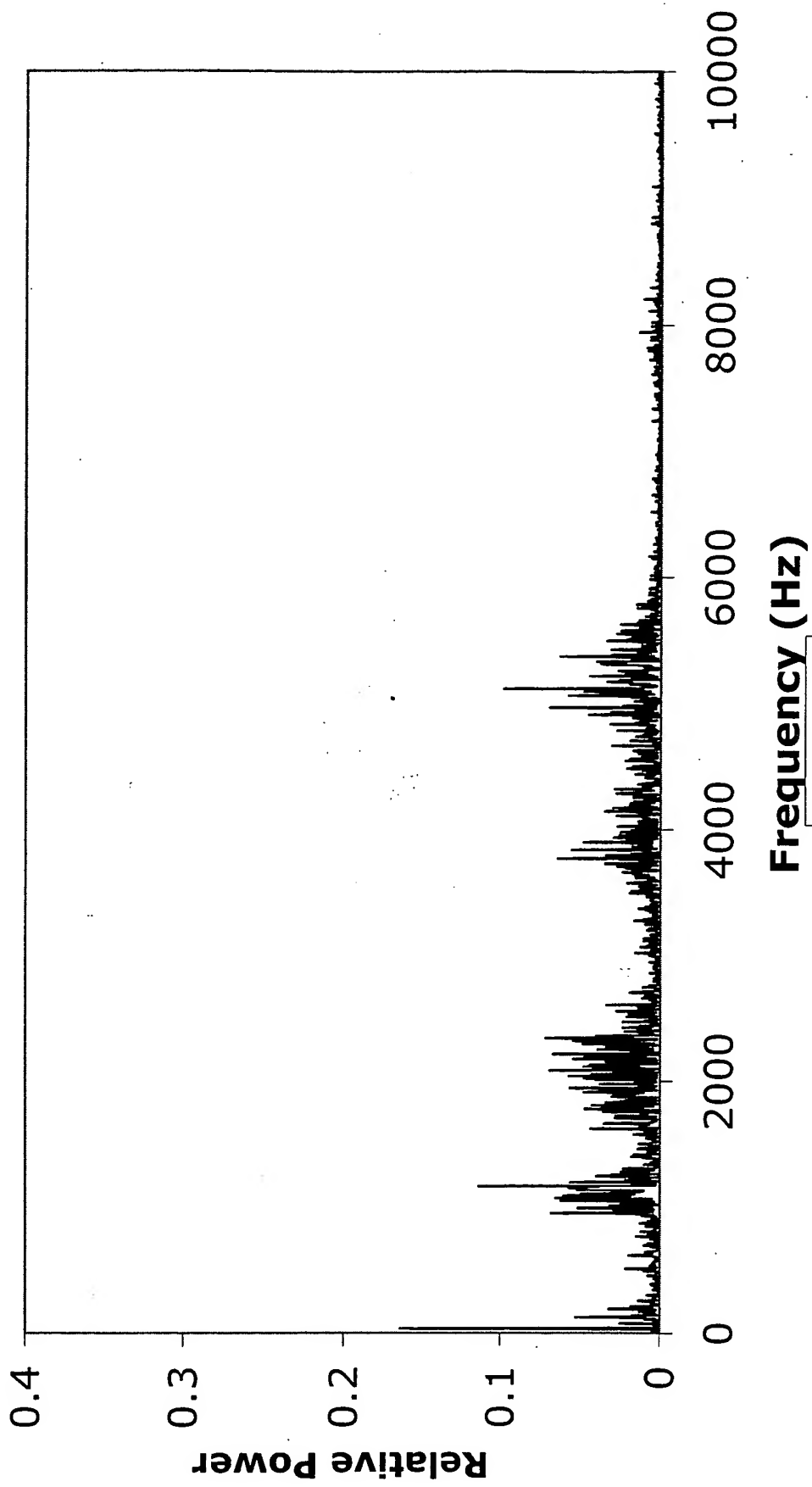


Figure 6G

11010 clogged to 52% flow 300 kPa



— Y axis

Figure 6H

11010 clogged to 52% flow 300 kPa

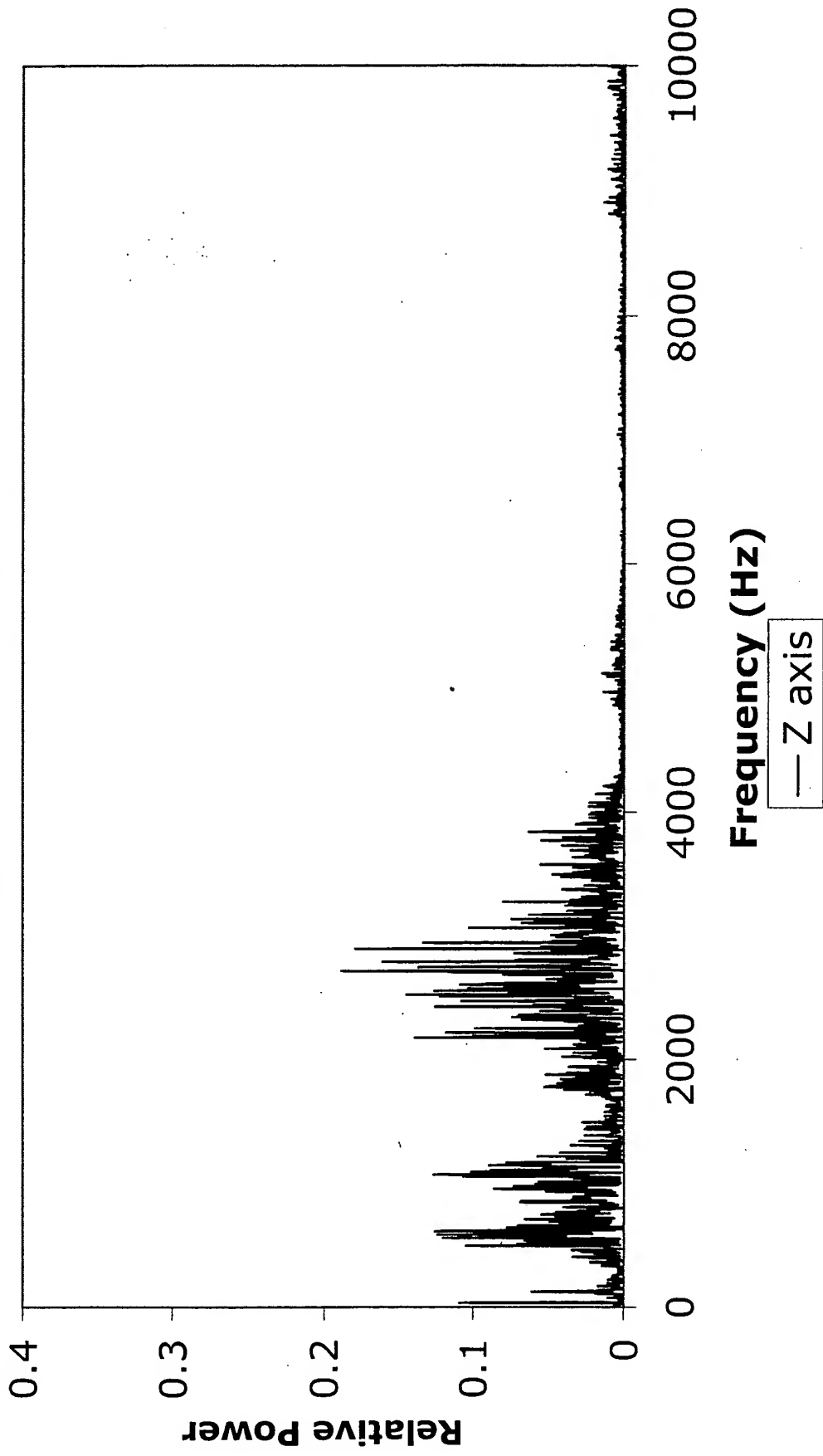
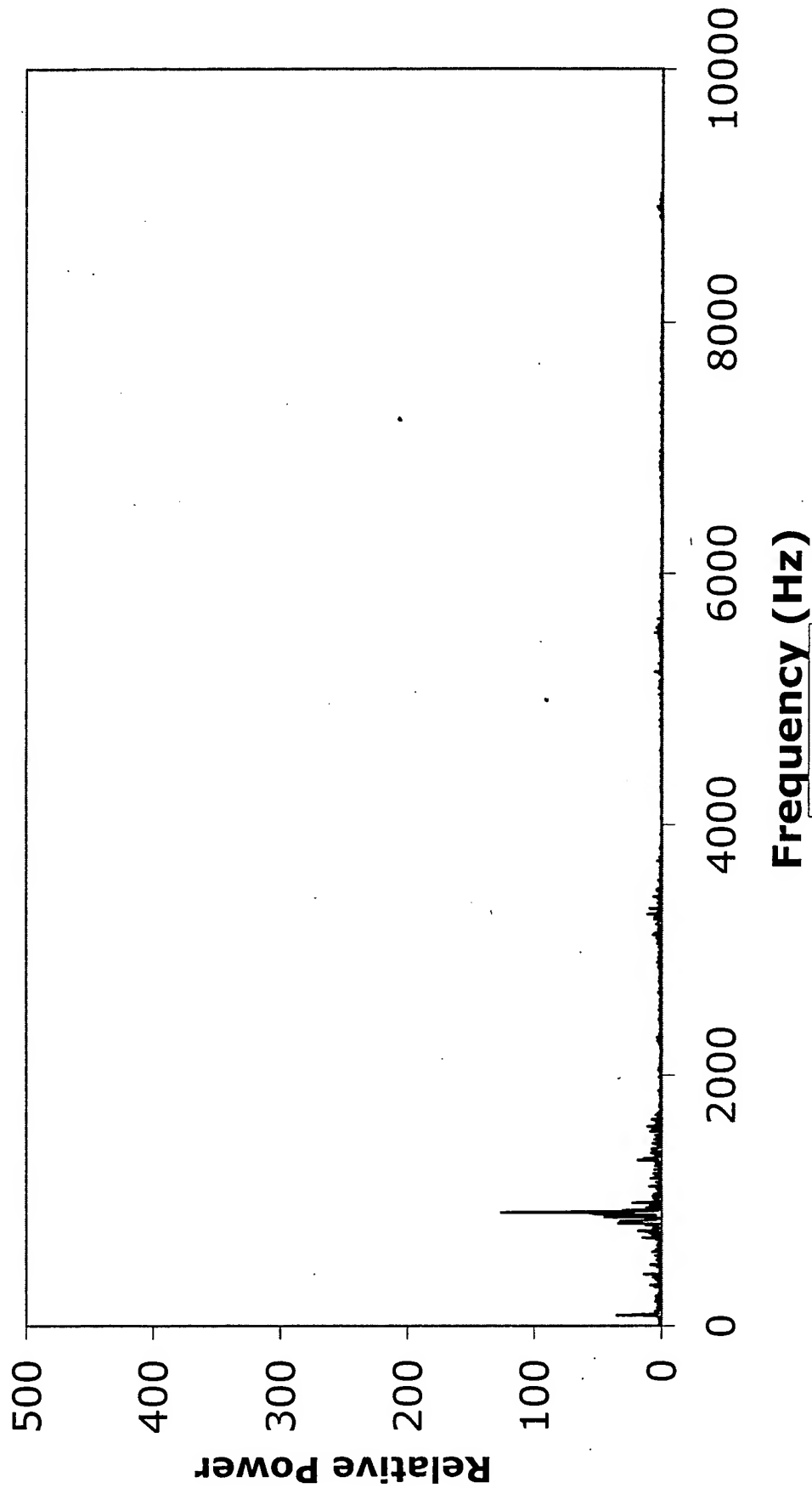


Figure 6I

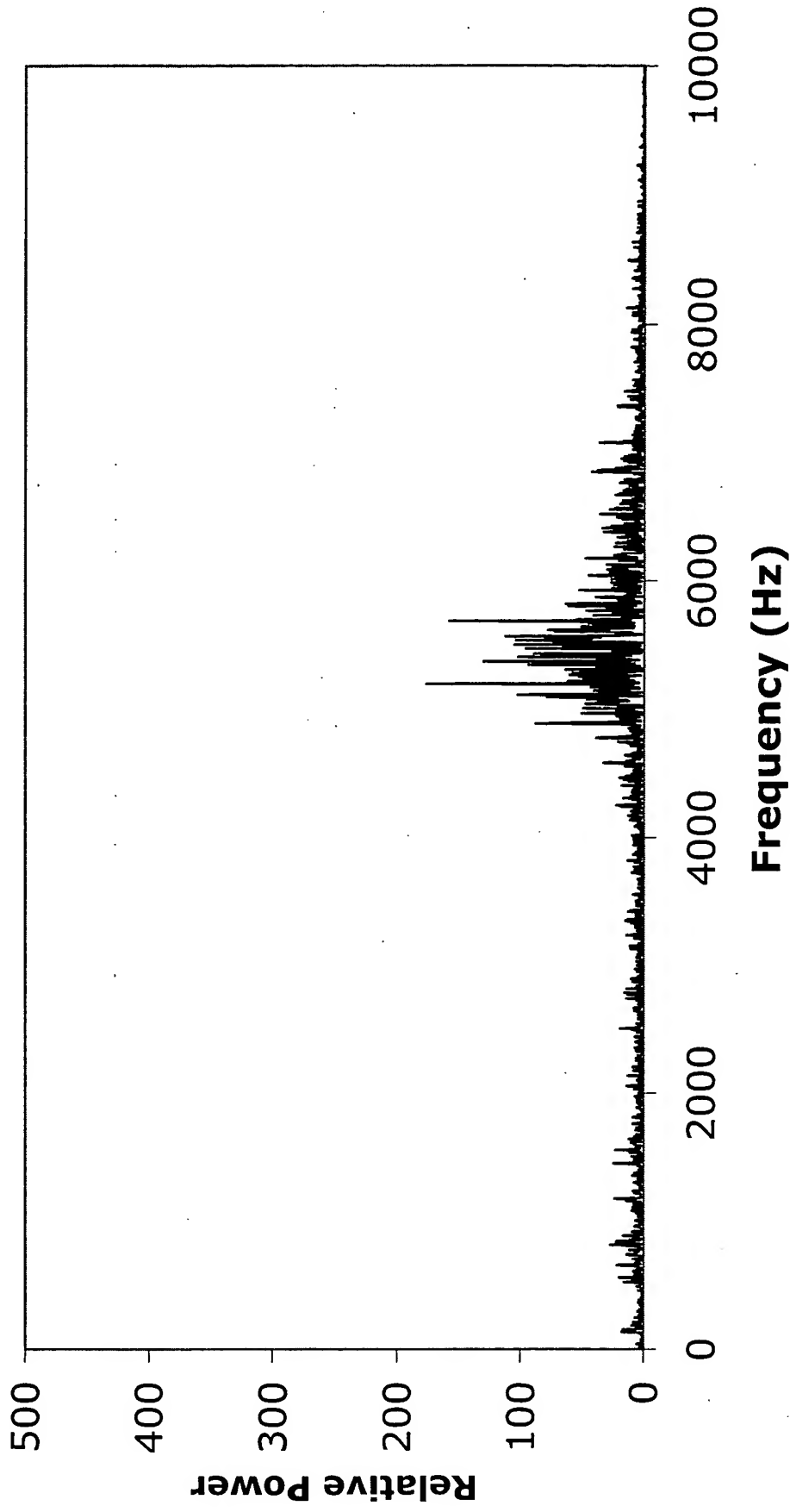
11008 AI nozzle normal flow 300 kPa



— X axis

Figure 6J

11008 AI nozzle normal flow 300 kPa



— Y axis

Figure 6K

11008 AI nozzle normal flow 300 kPa

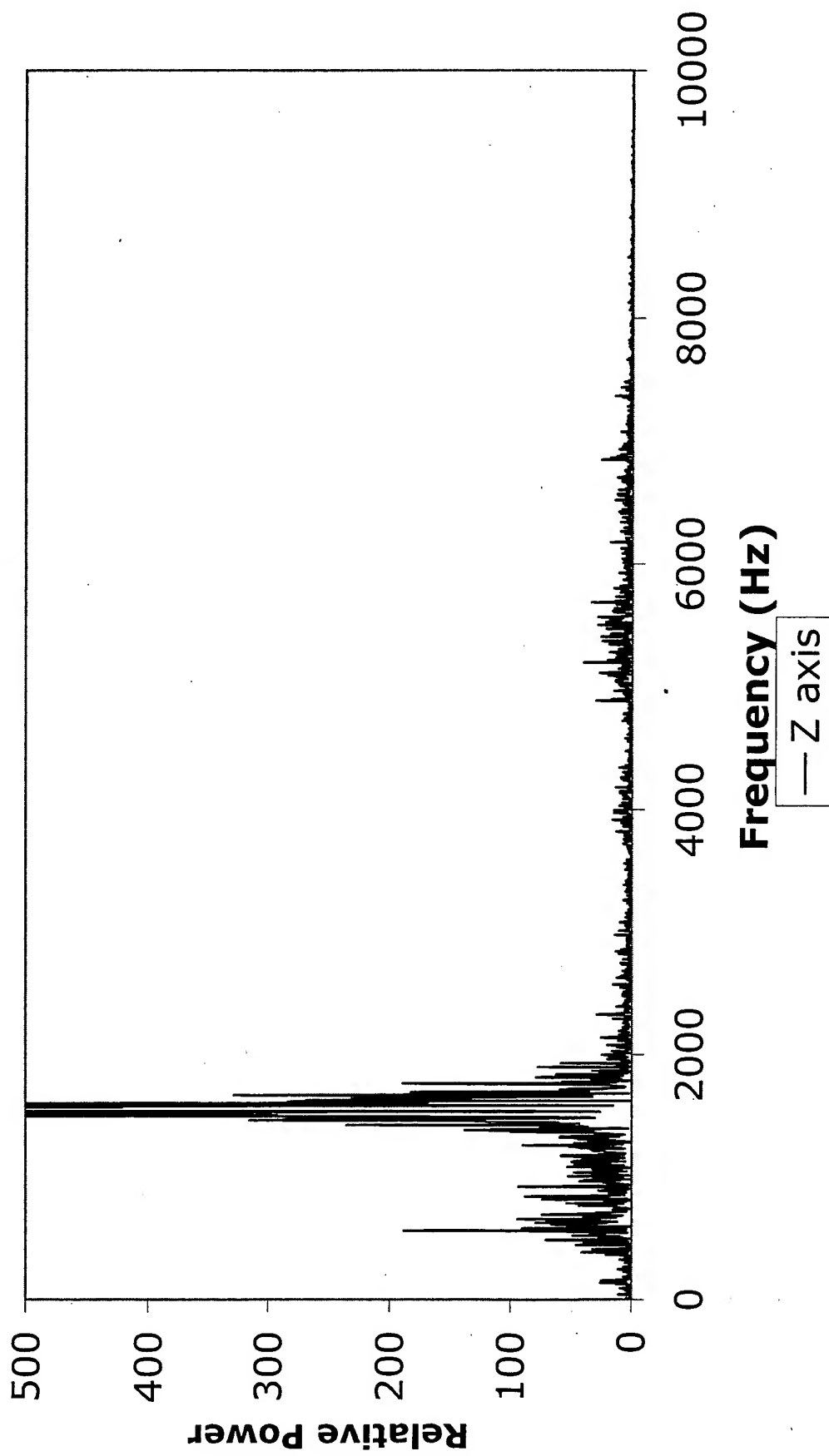
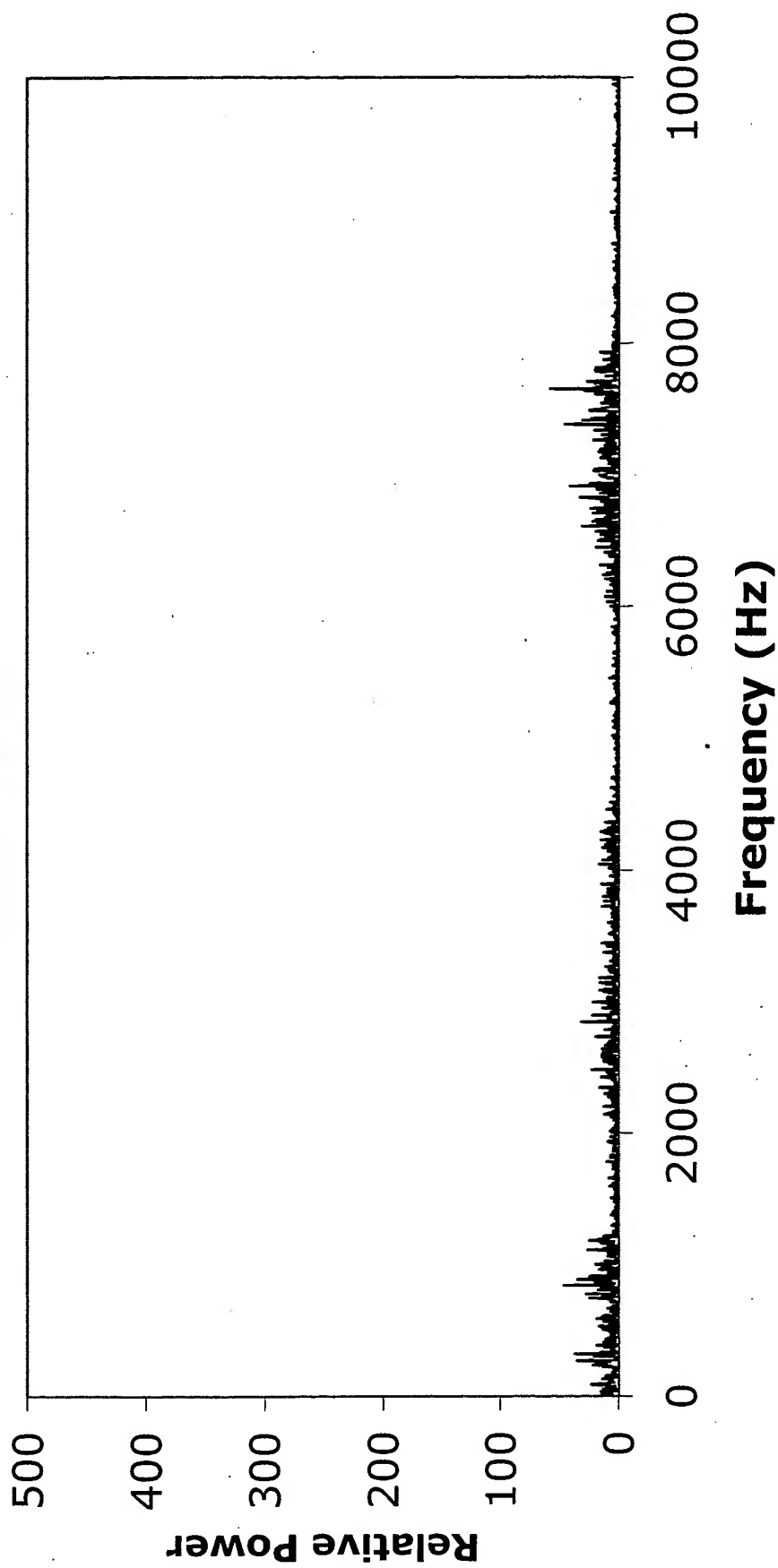


Figure 6L

**11008 AI nozzle plugged 113% flow
300 kPa**



— X axis

Figure 6M

**11008 AI nozzle plugged 113% flow
300 kPa**

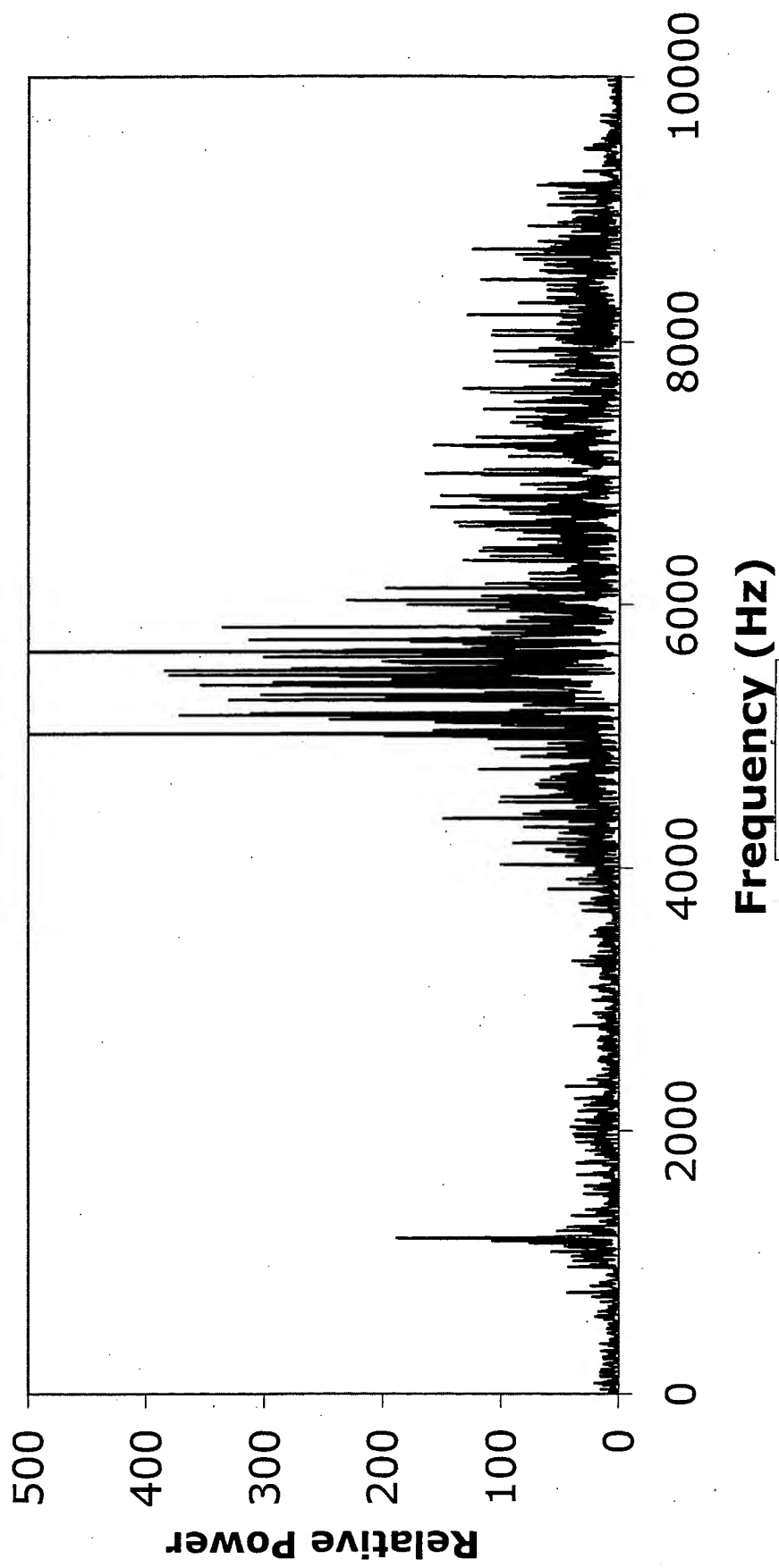


Figure 6N

**11008 AI nozzle plugged 113% flow
300 kPa**

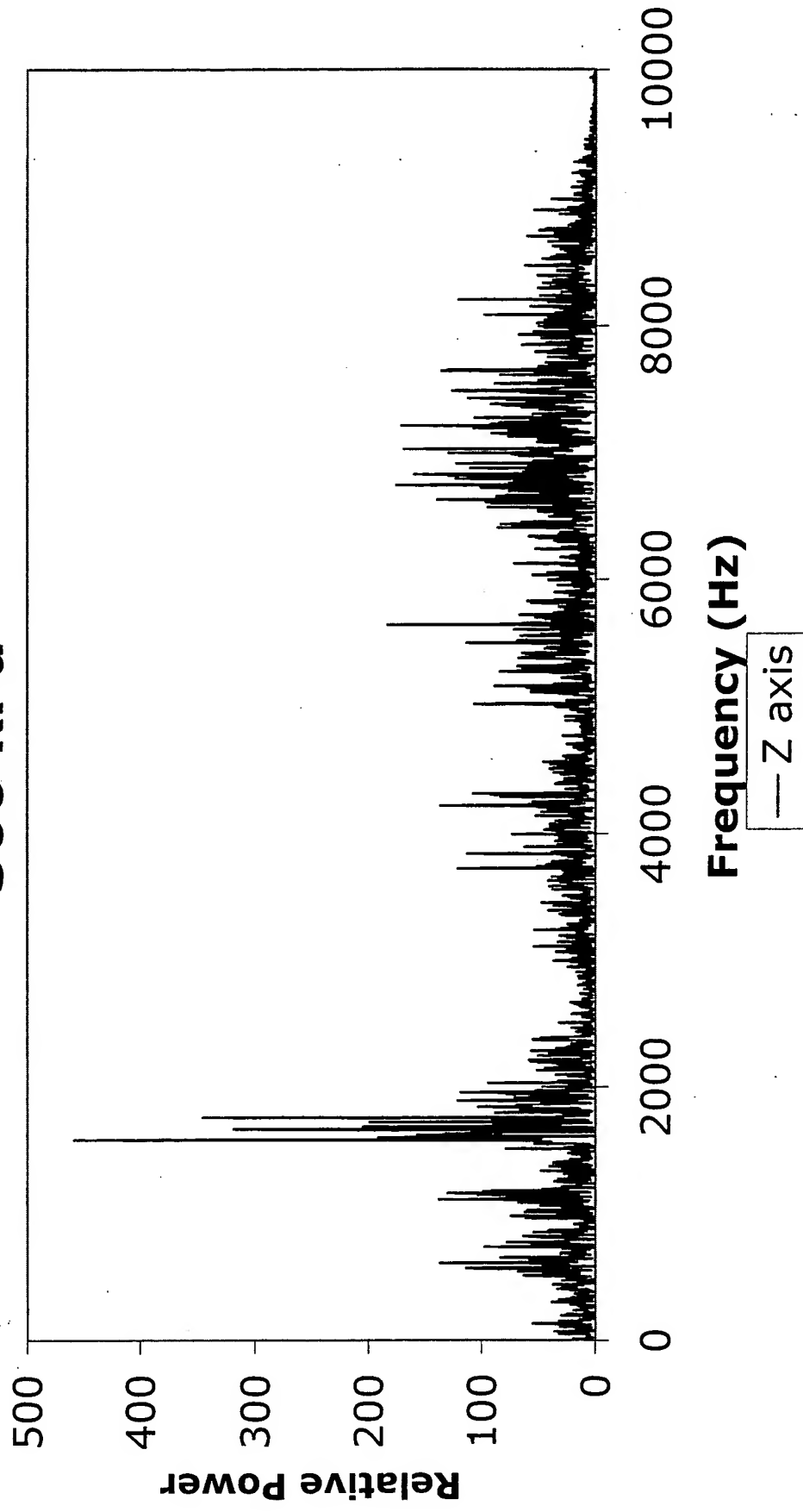


Figure 60

**11008 AI nozzle plugged to 114% flow
300 kPa**

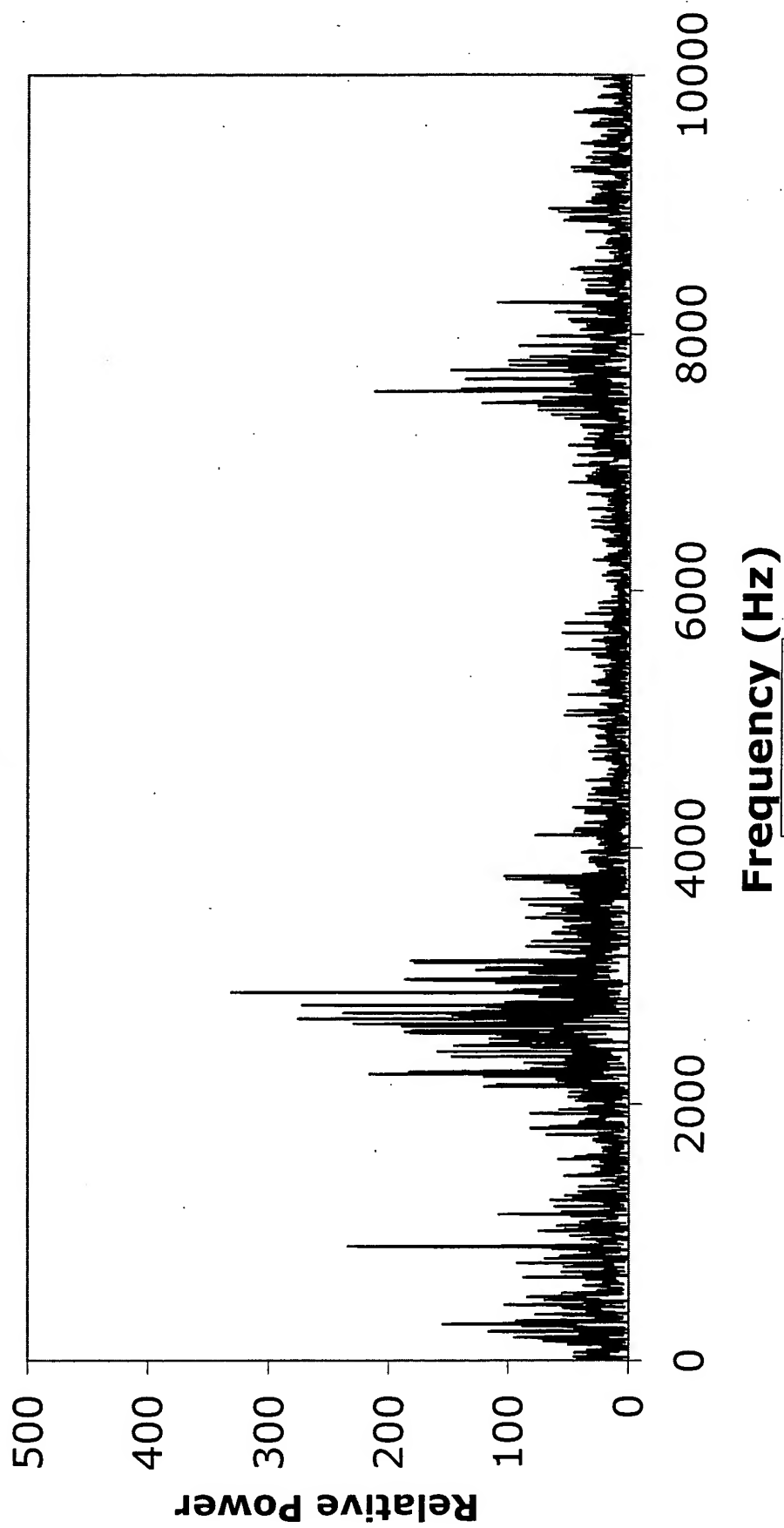


Figure 6P

**11008 AI nozzle plugged to 114% flow
300 kPa**

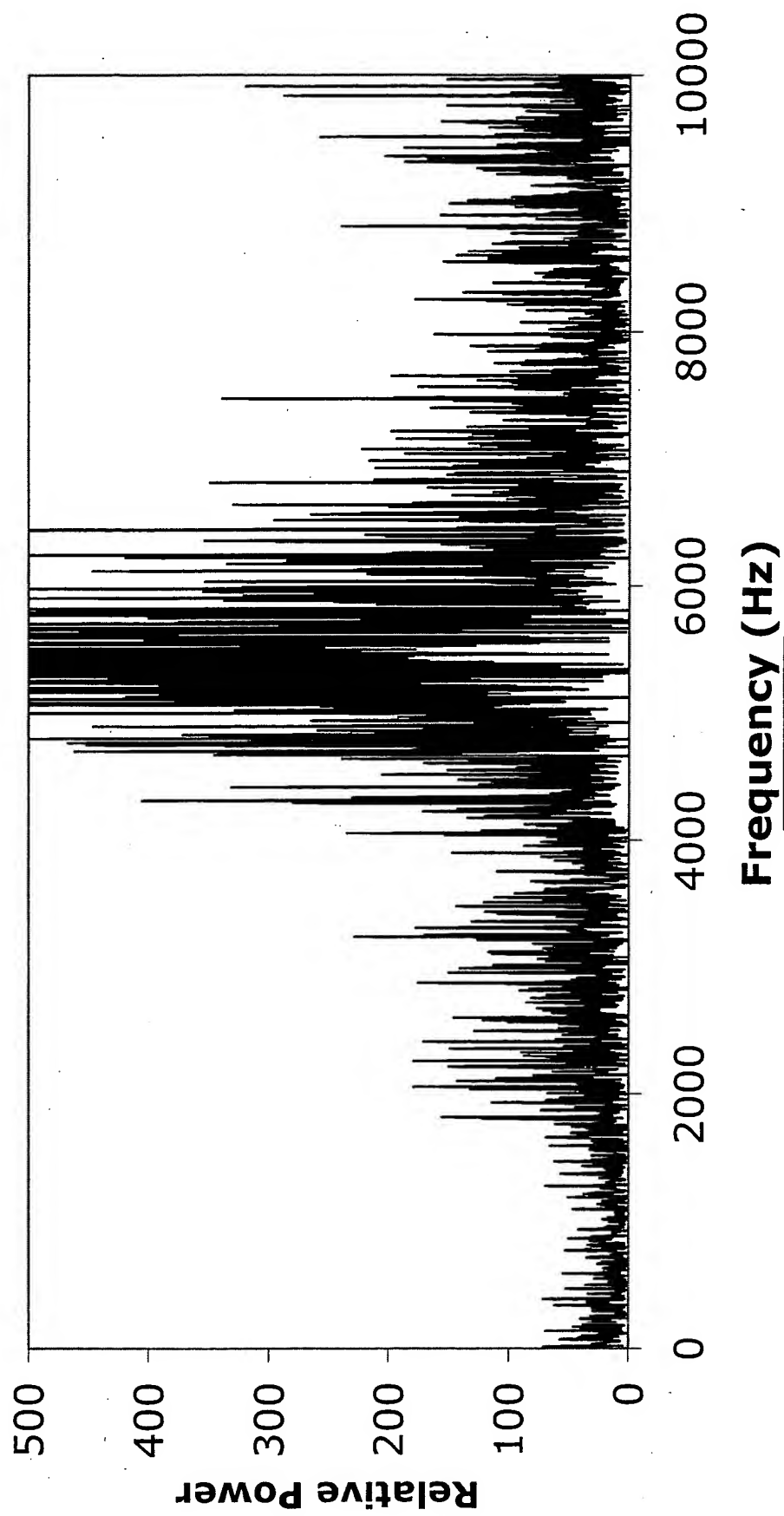


Figure 6Q

**11008 AI nozzle plugged to 114% flow
300 kPa**

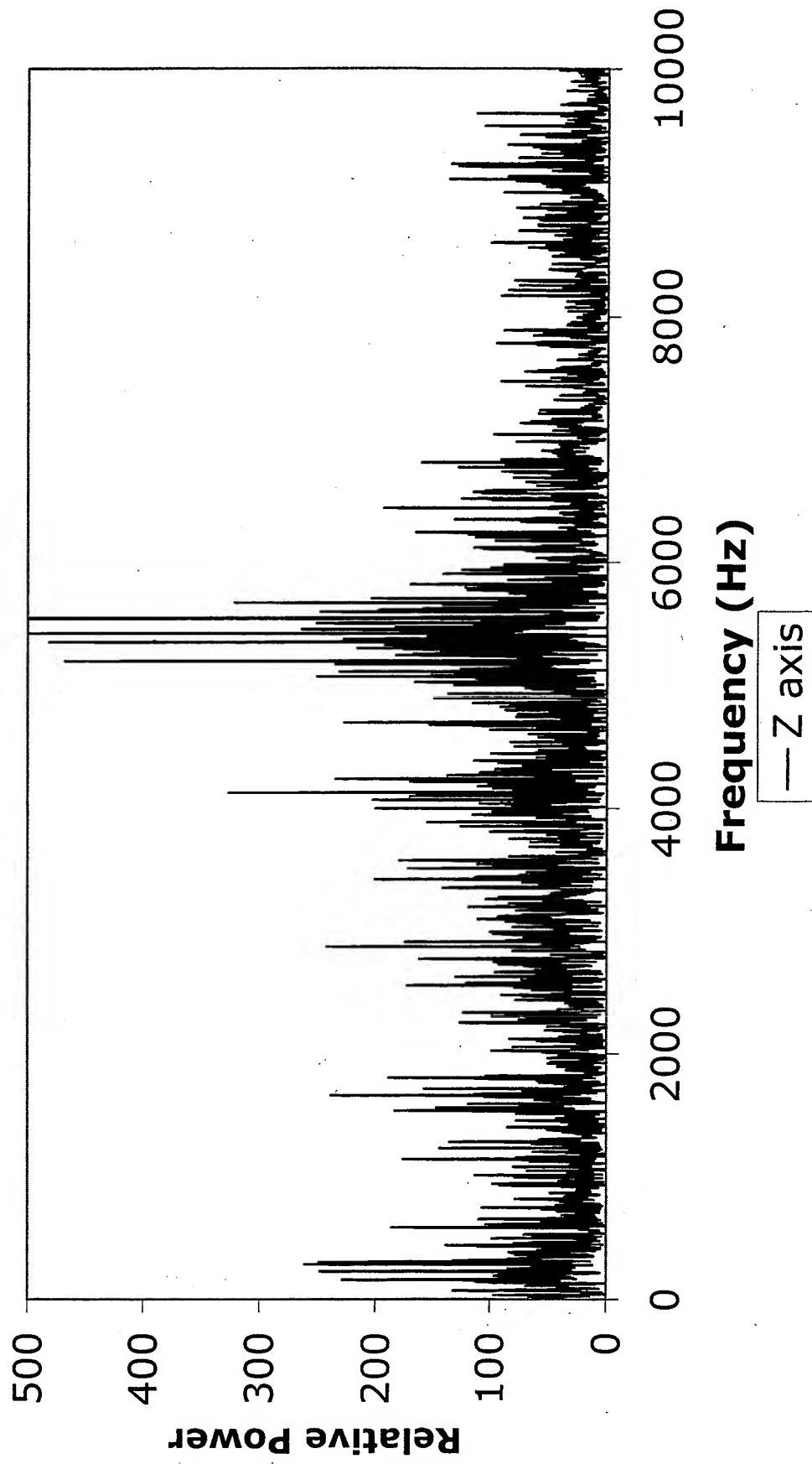
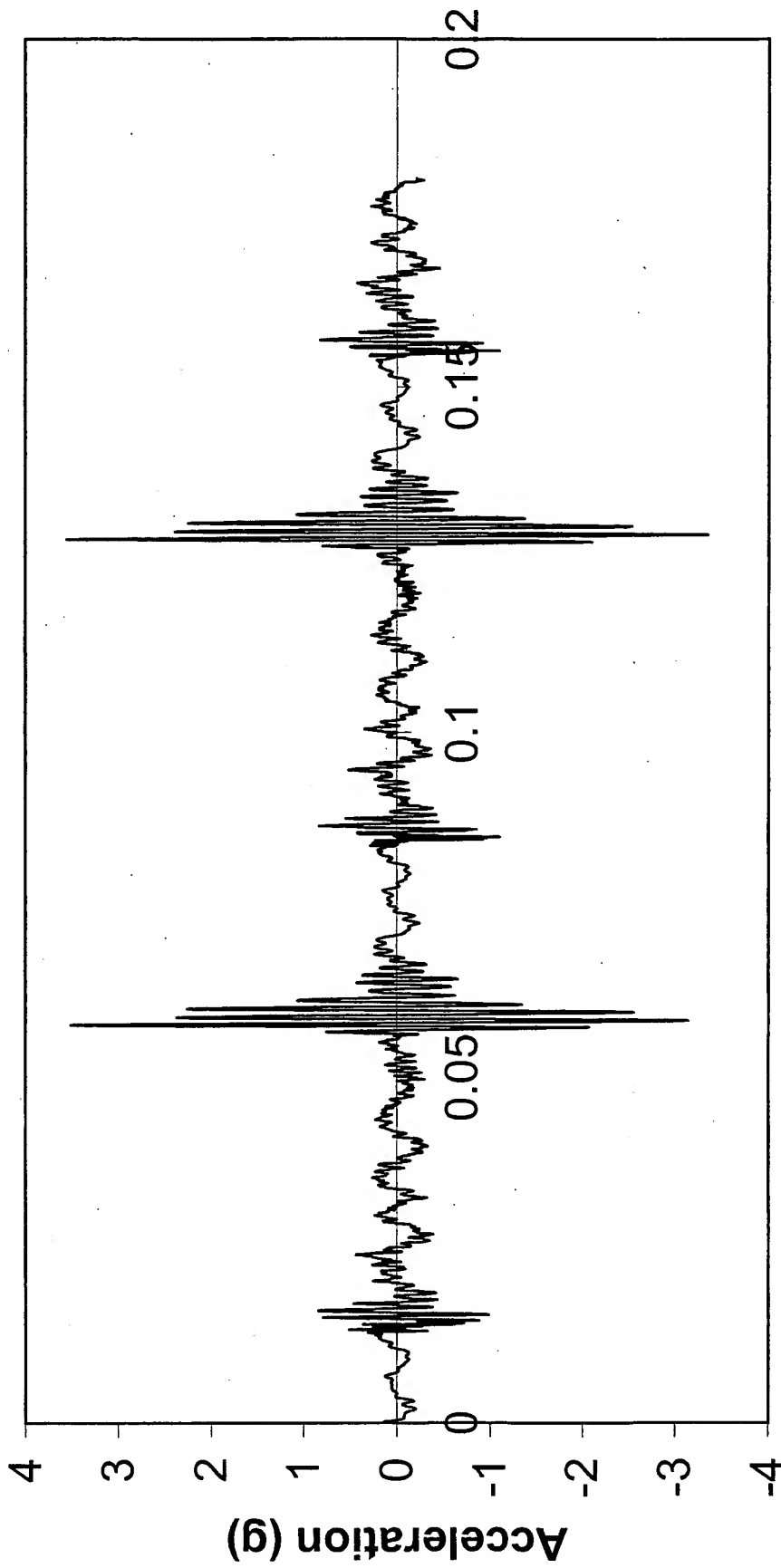


Figure 6R

8008 nozzle 15 Hz 60% dc 300 kPa

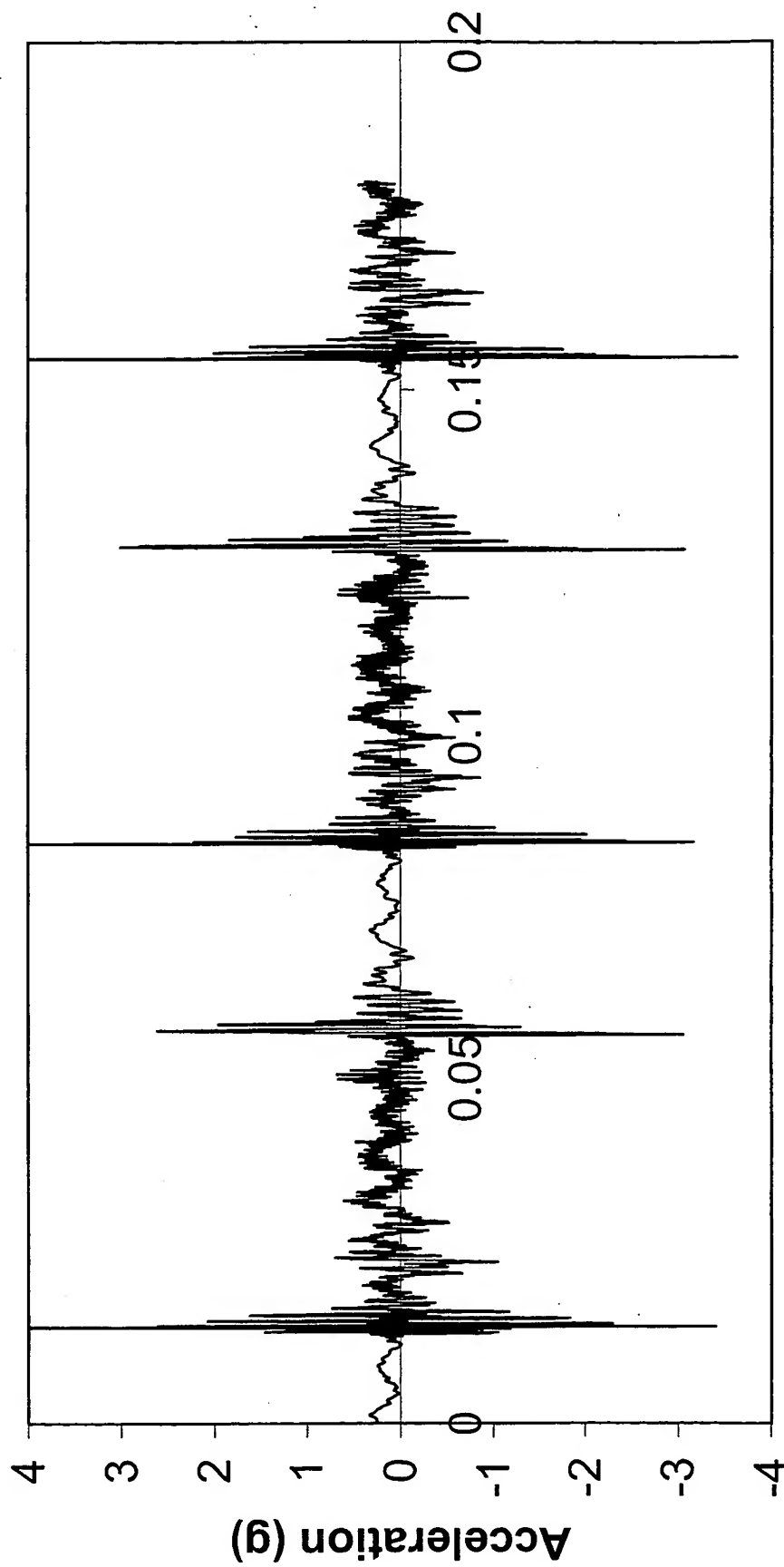


Time (s)

— X-axis

Figure 7A

8008 nozzle 15 Hz 60% dc 300 kPa

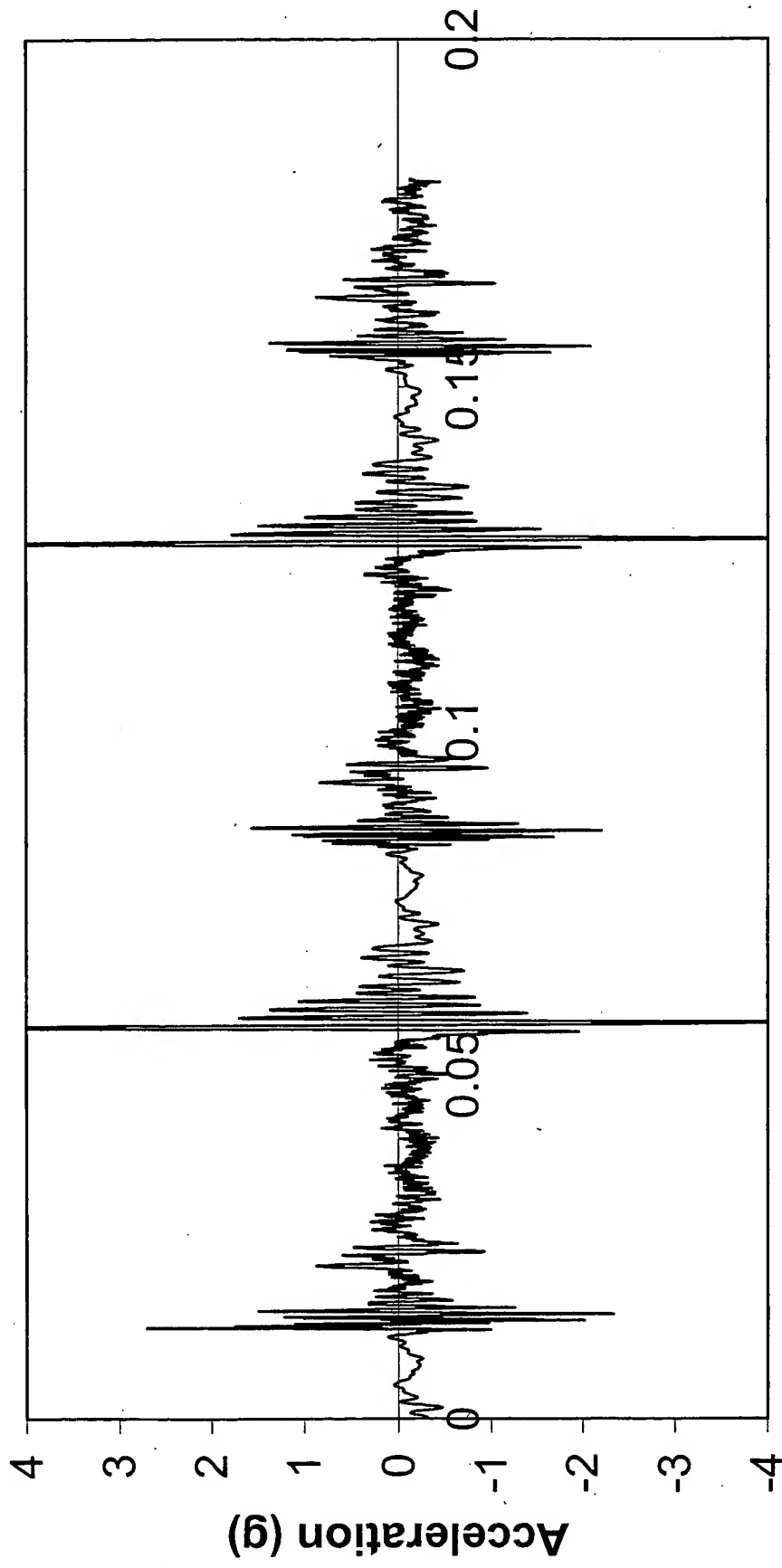


Time (s)

— Y-axis

Figure 7B

8008 nozzle 15 Hz 60% dc 300 kPa



Time (s)

— Z-axis

Figure 7C

**8008 300 kPa 15 Hz 60% dc
on periods**

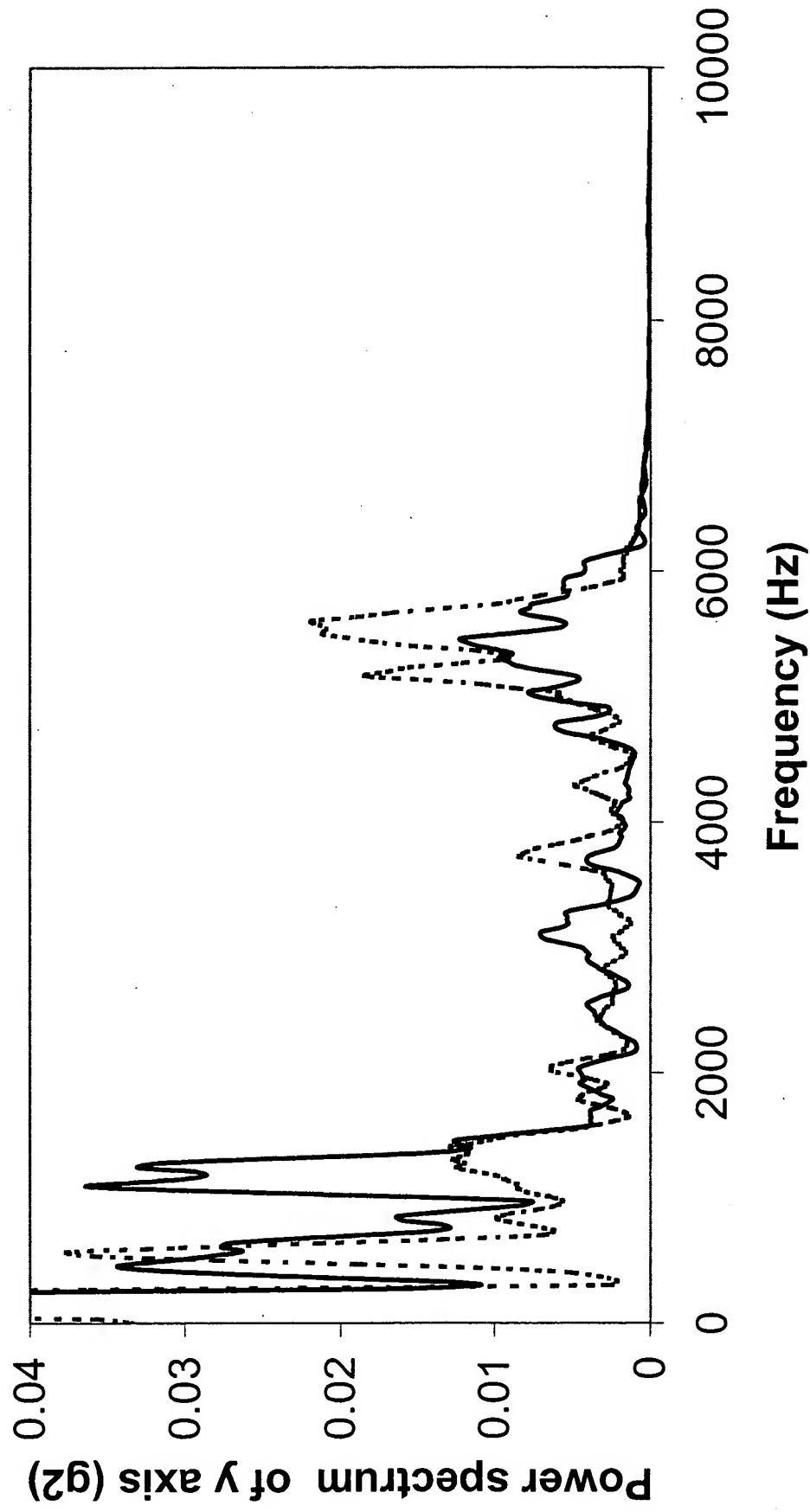


Figure 7D

8008 300 kPa 15 Hz 60% dc
off periods

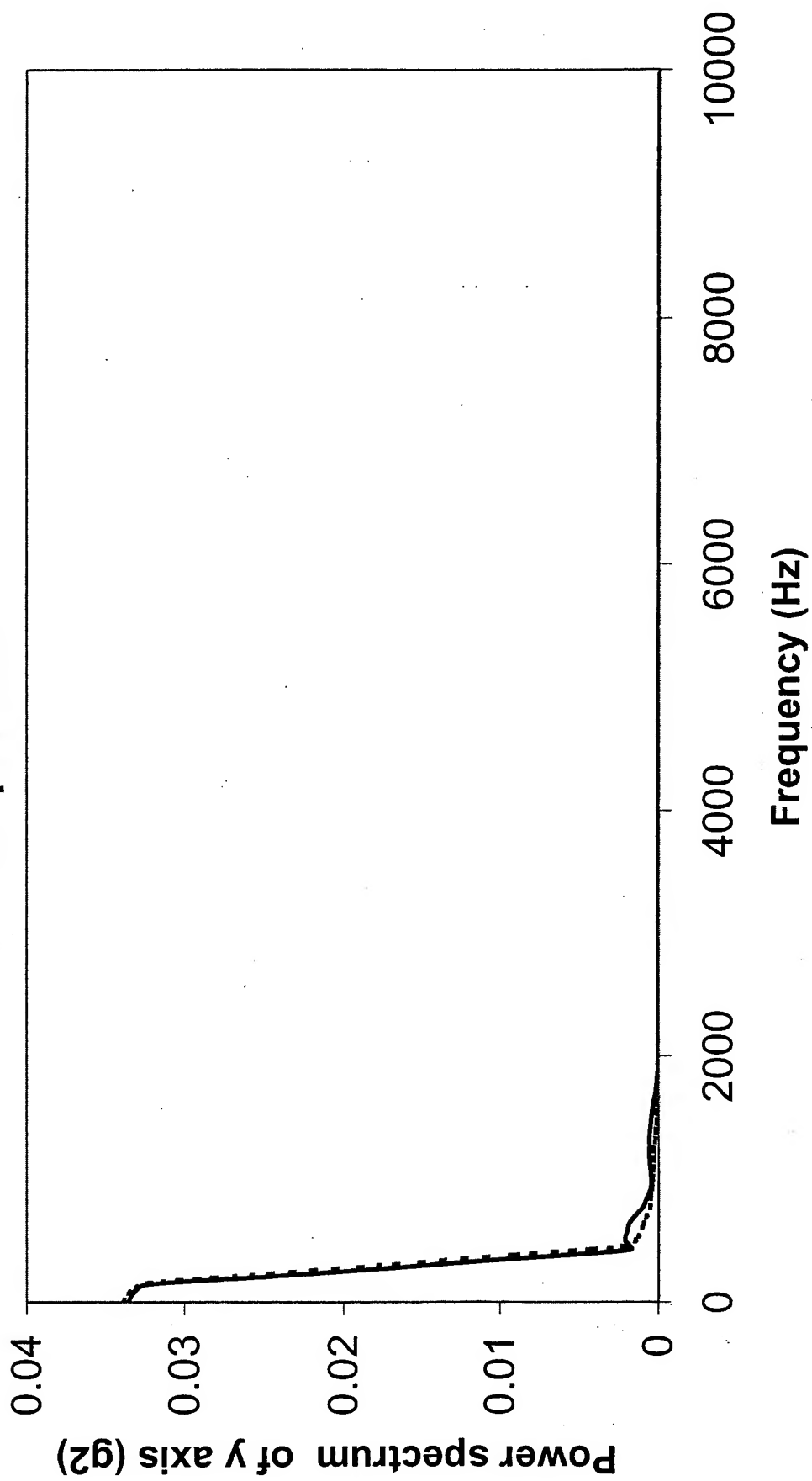


Figure 7E

8001 nozzle 15 Hz 60% dc 300 kPa

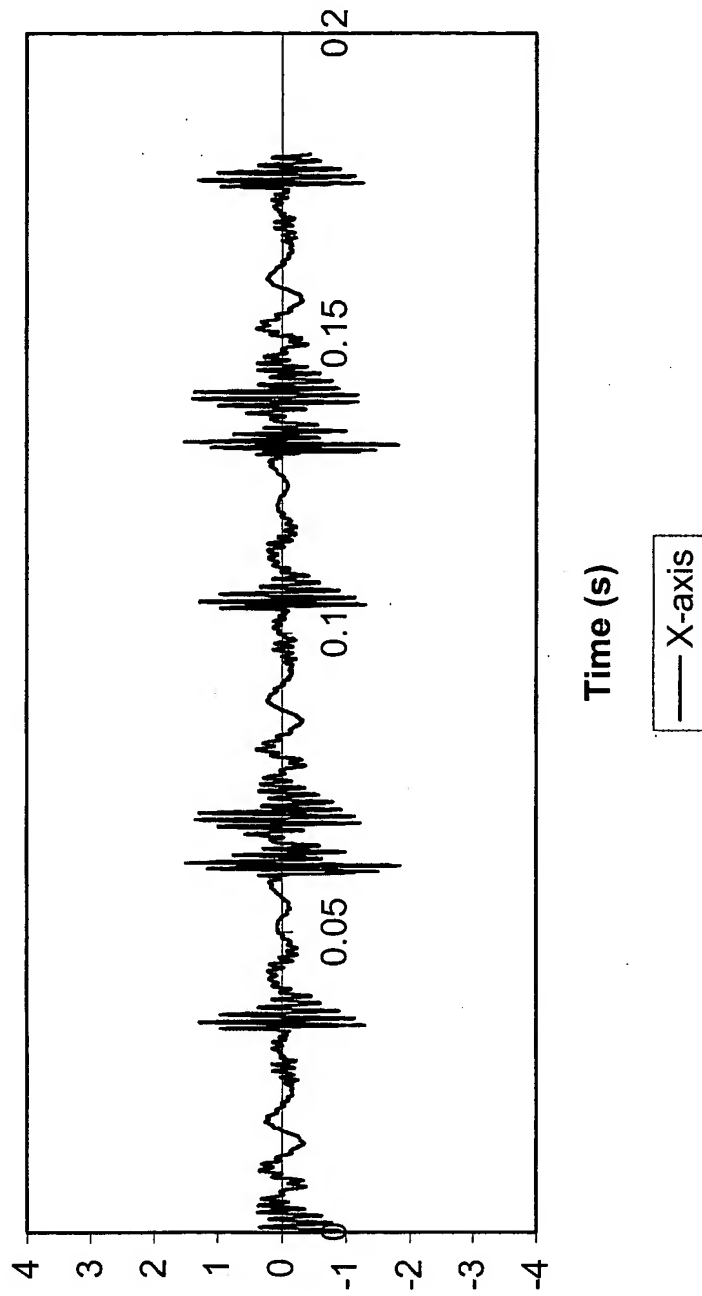


Figure 7F

8001 nozzle 15 Hz 60% dc 300 kPa

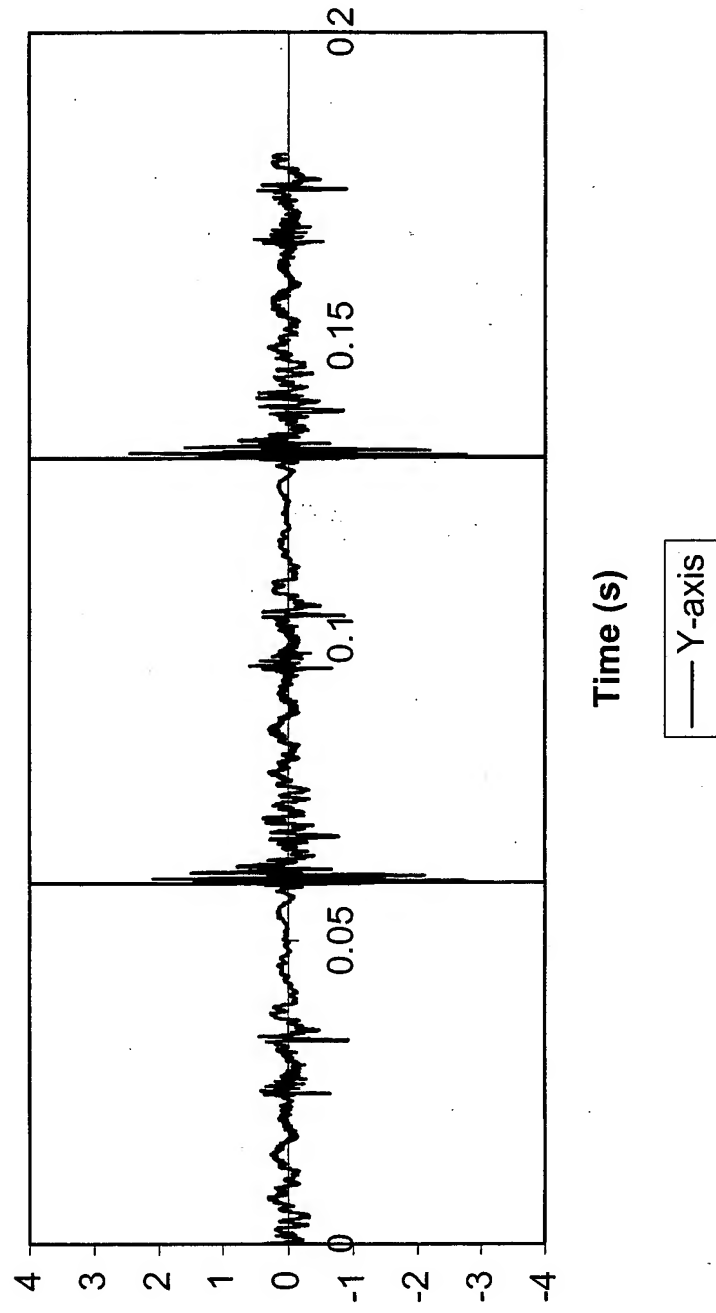


Figure 7G

8001 nozzle 15 Hz 60% dc 300 kPa

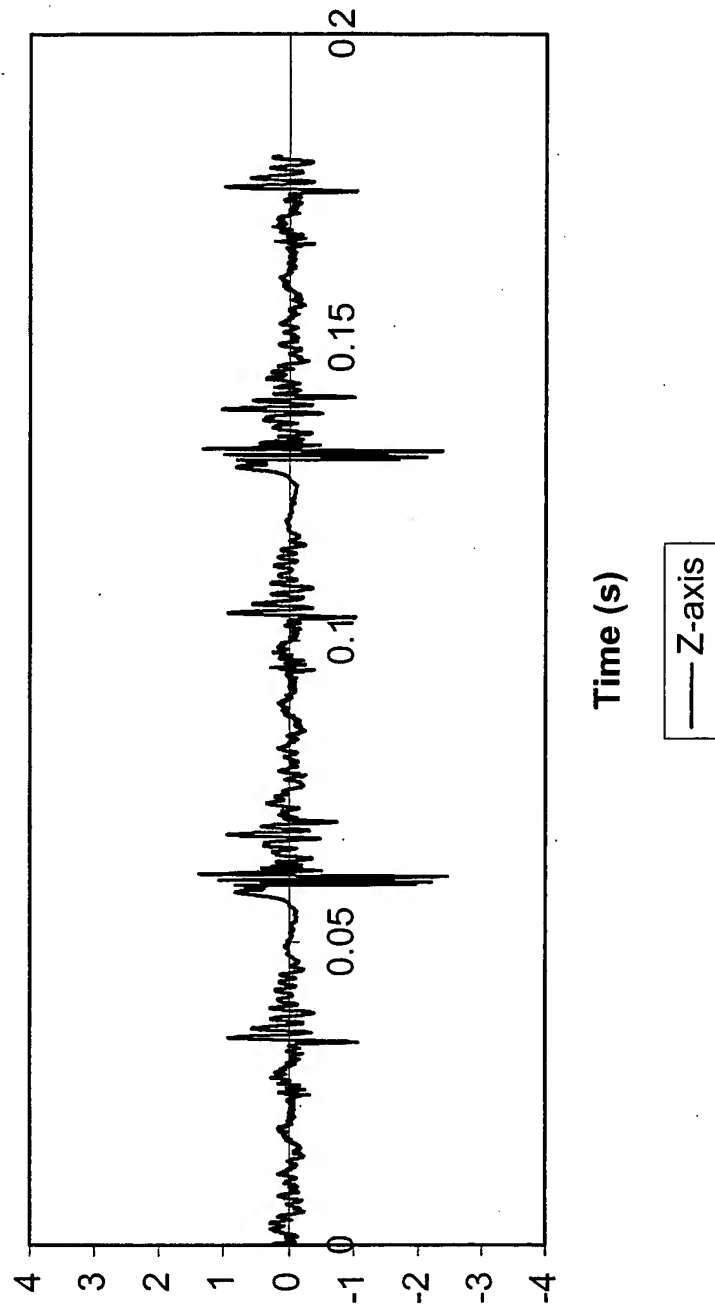


Figure 7H

**8001 300 kPa 15 Hz 60% dc
on periods**

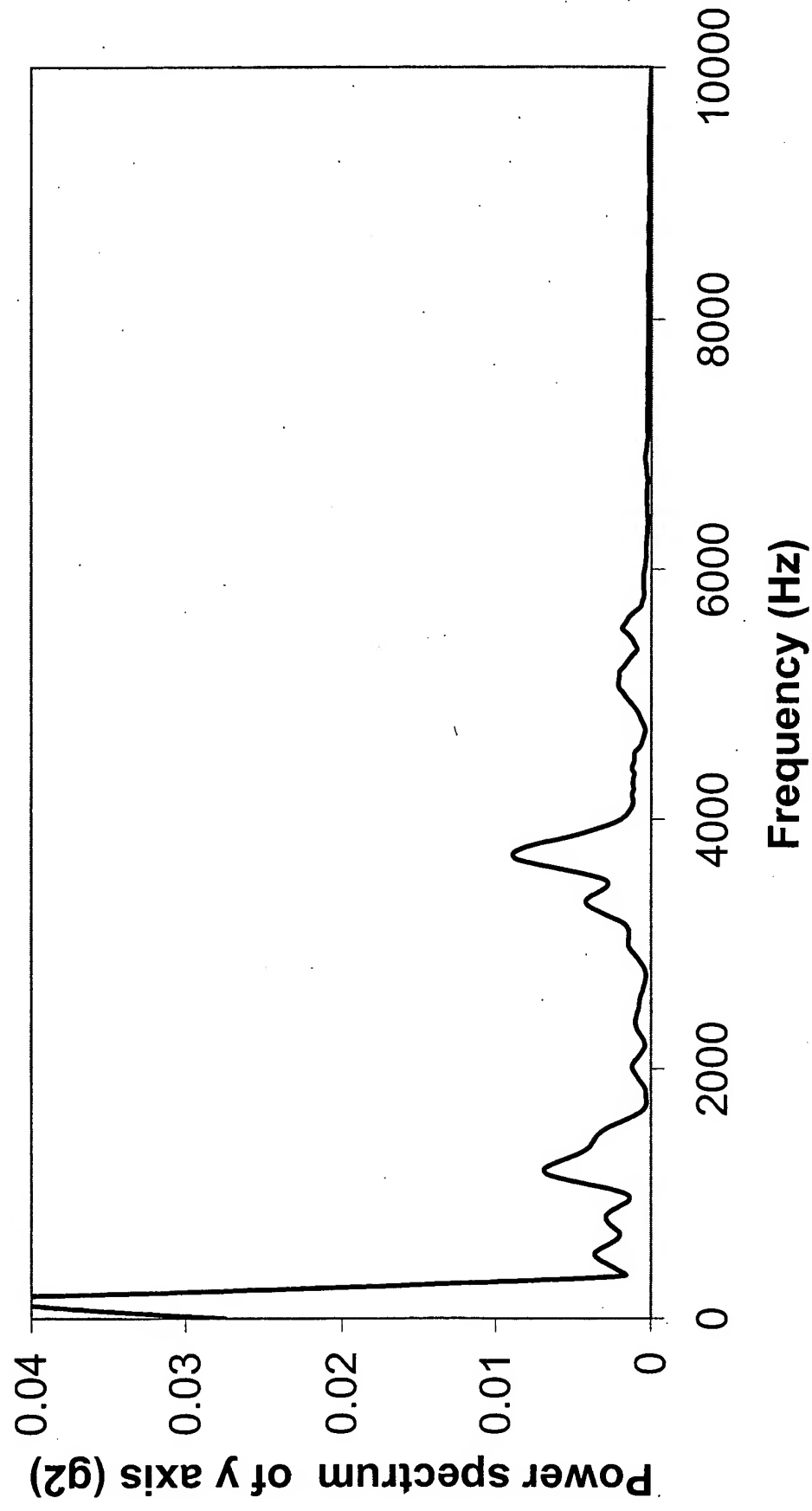


Figure 7I

**8001 300 kPa 15 Hz 60% dc
off periods**

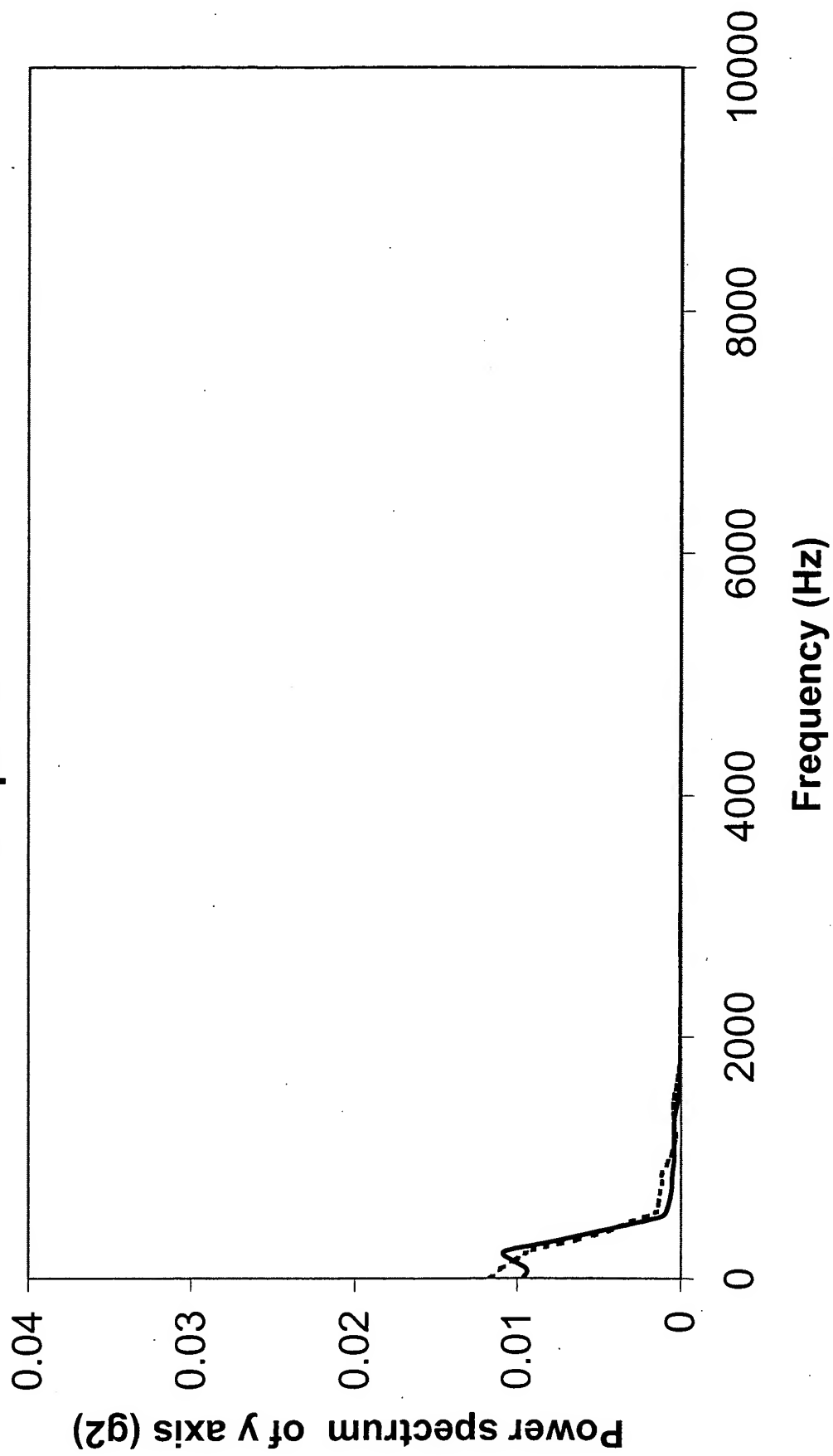


Figure 7J

8008 nozzle 15 Hz 60% dc zero flow 0 kPa

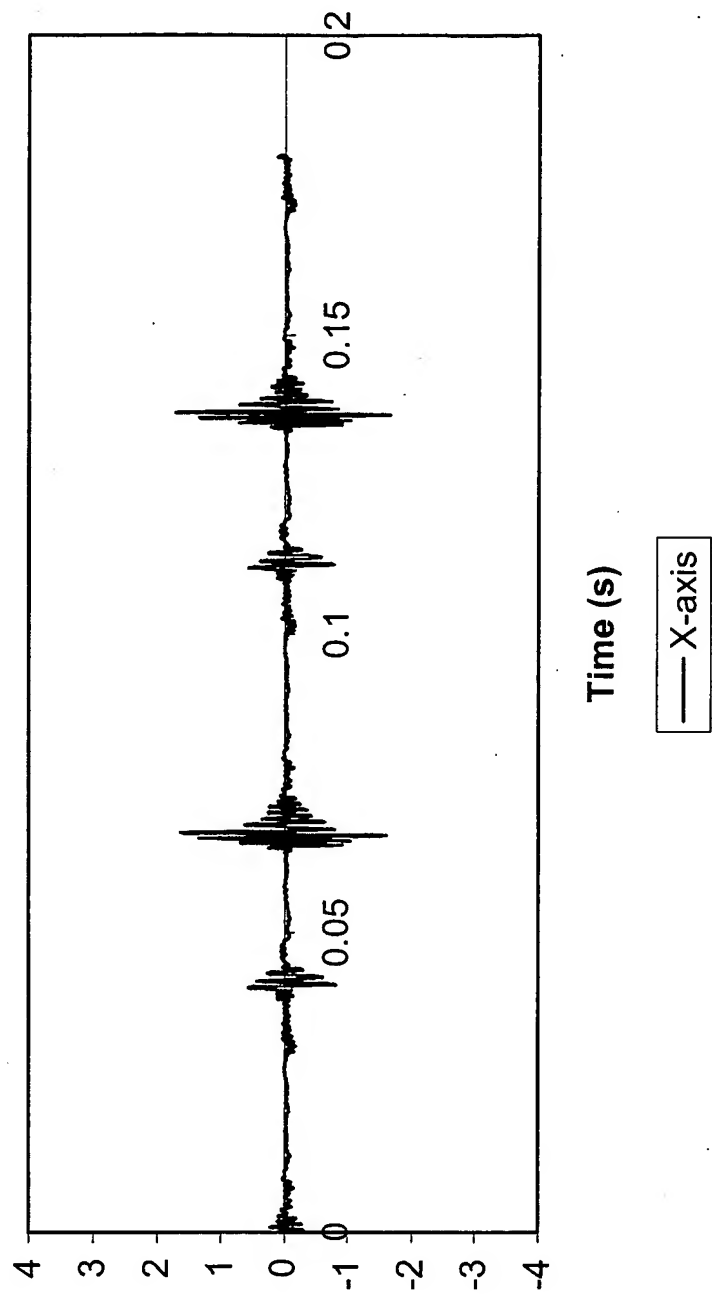


Figure 8A

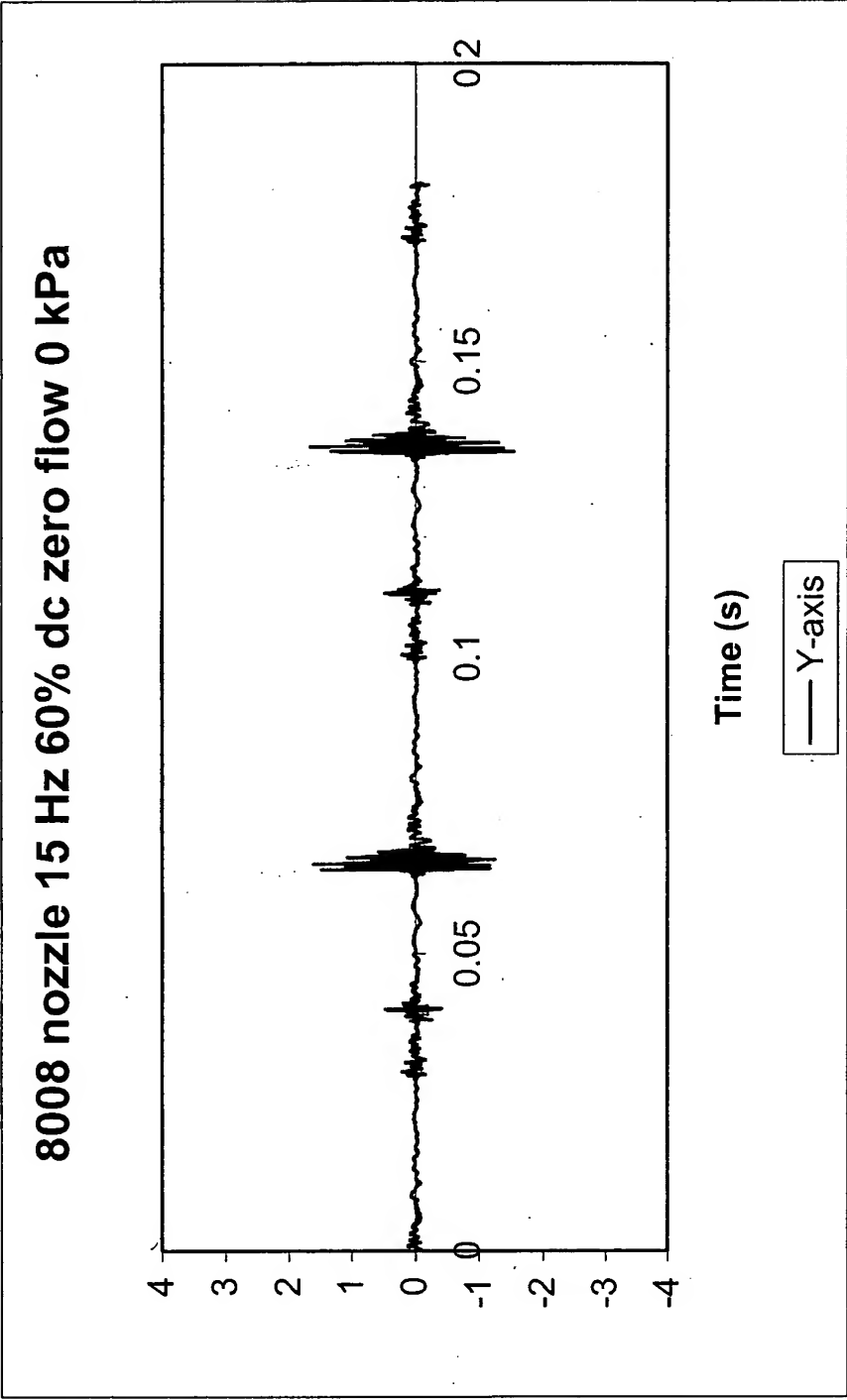


Figure 8B

8008 nozzle 15 Hz 60% dc zero flow 0 kPa

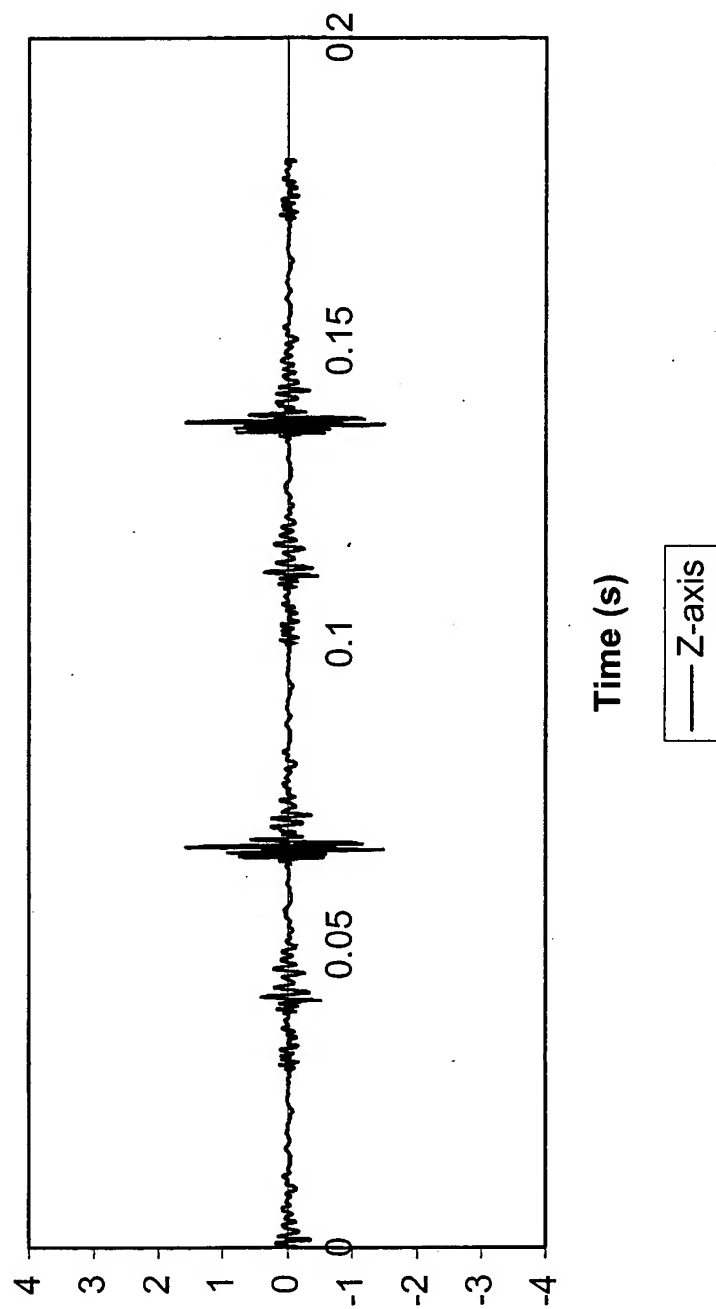


Figure 8C

**8008 nozzle 15 Hz 60% dc zero flow 0 kPa
on periods**

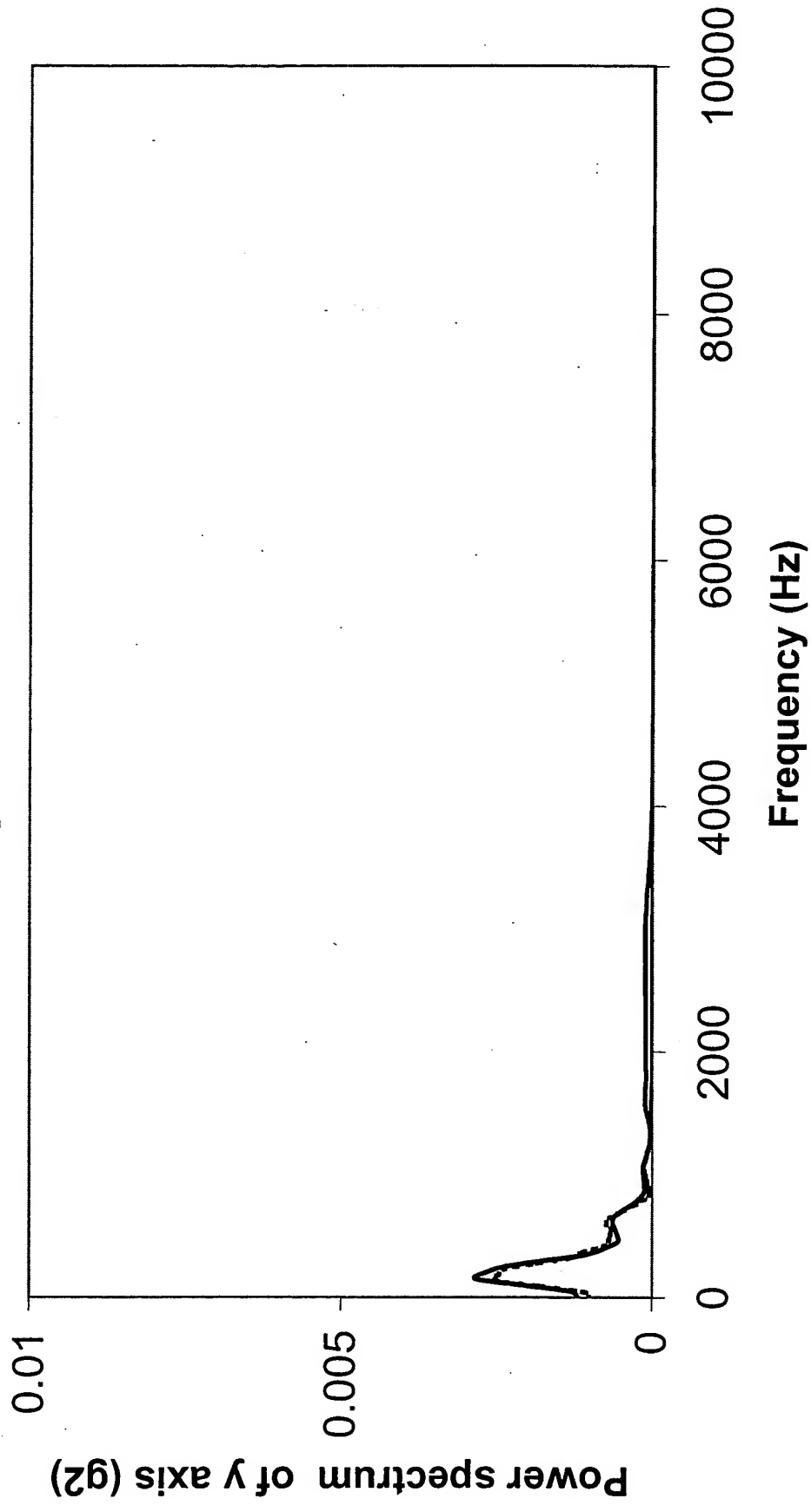


Figure 8D

**8008 nozzle 15 Hz 60% dc zero flow 0 kPa
off periods**

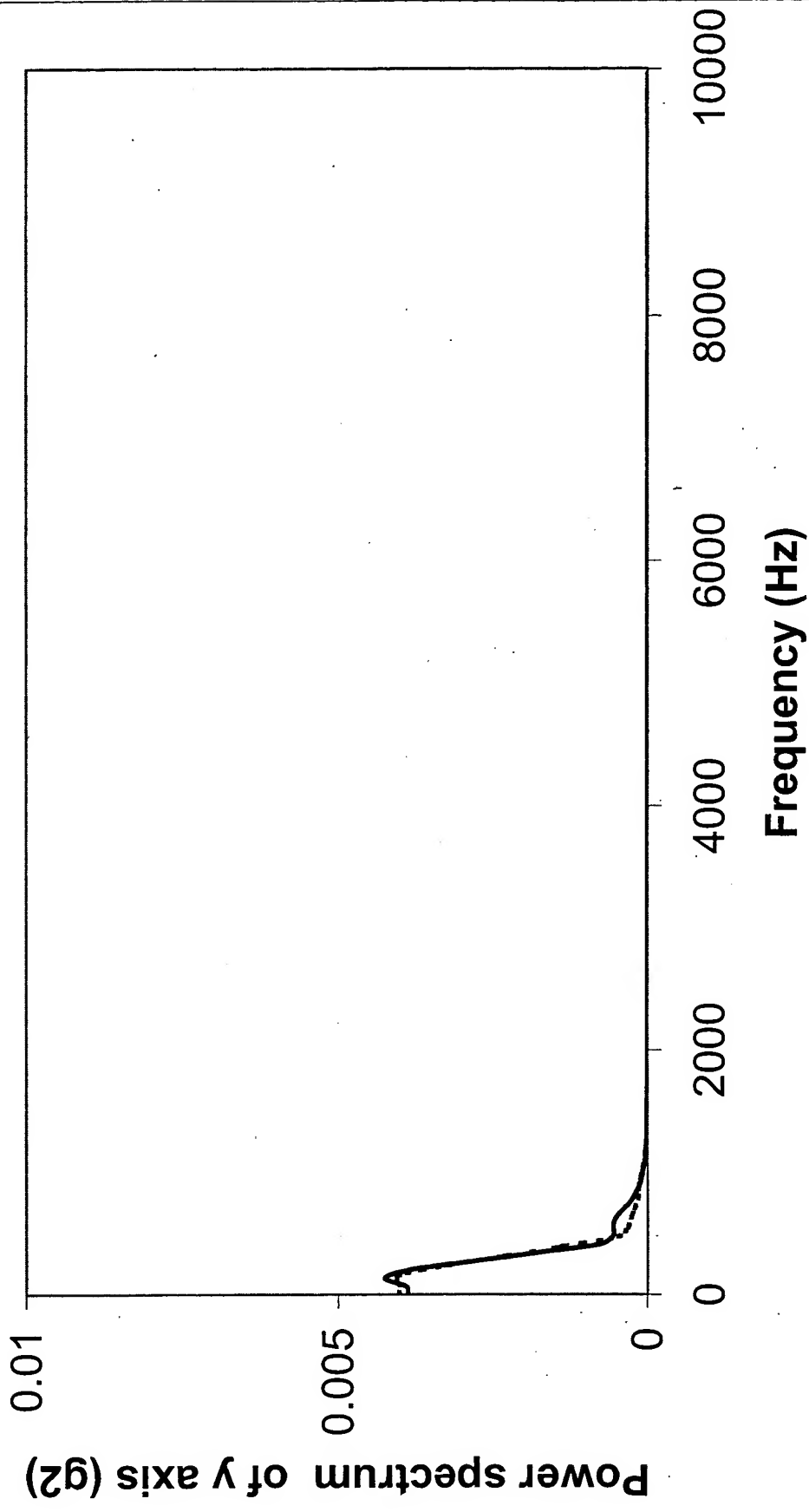
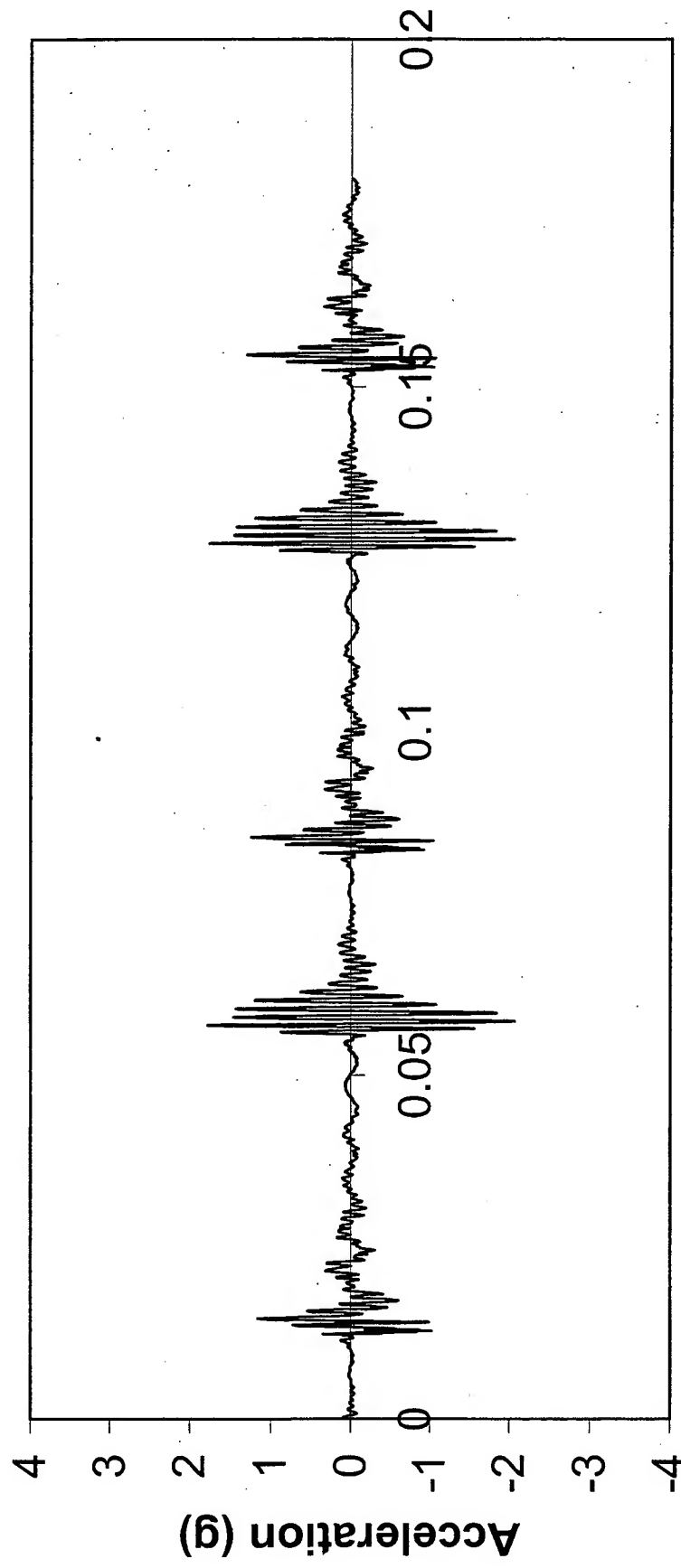


Figure 8E

**8008 nozzle 15 Hz 60% dc clogged to 47% flow
300 kPa**

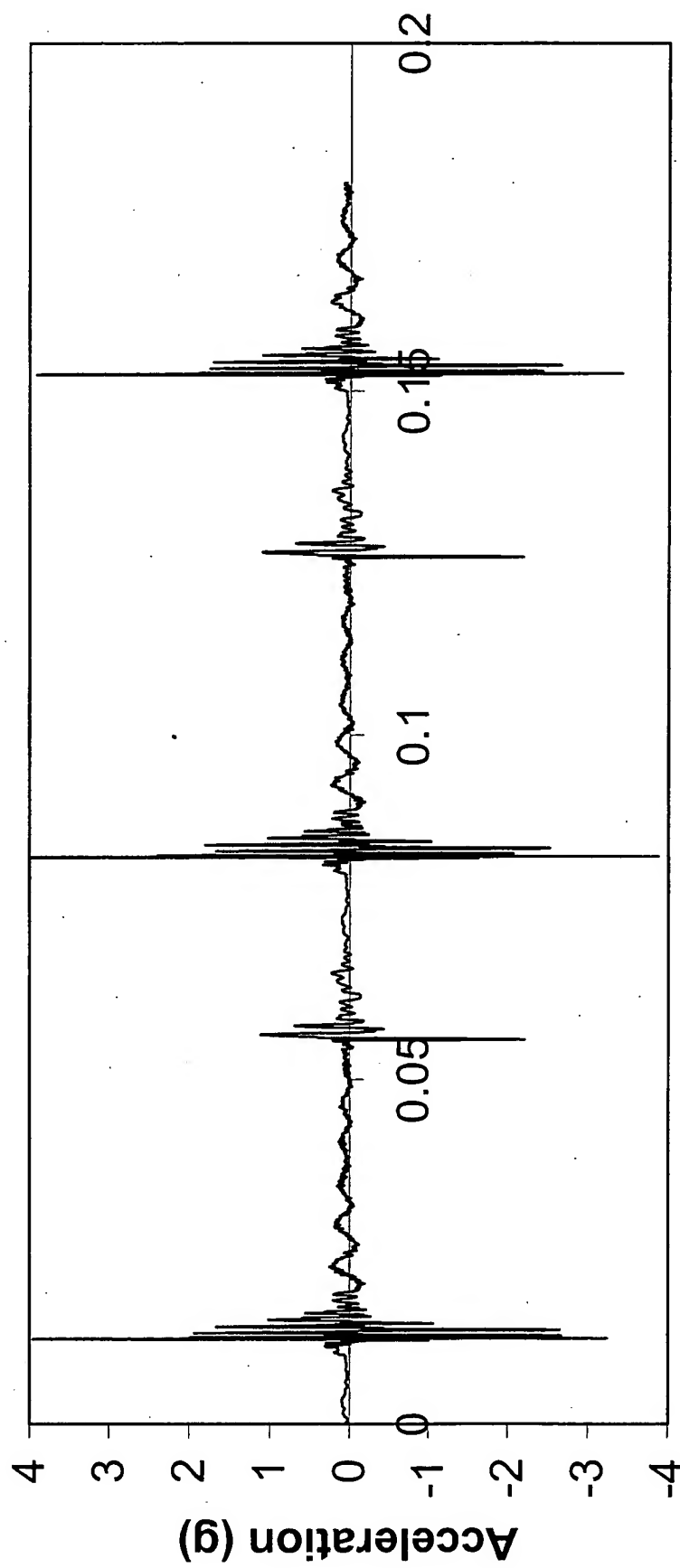


Time (s)

— X-axis

Figure 8F

**8008 nozzle 15 Hz 60% dc clogged to 47% flow
300 kPa**

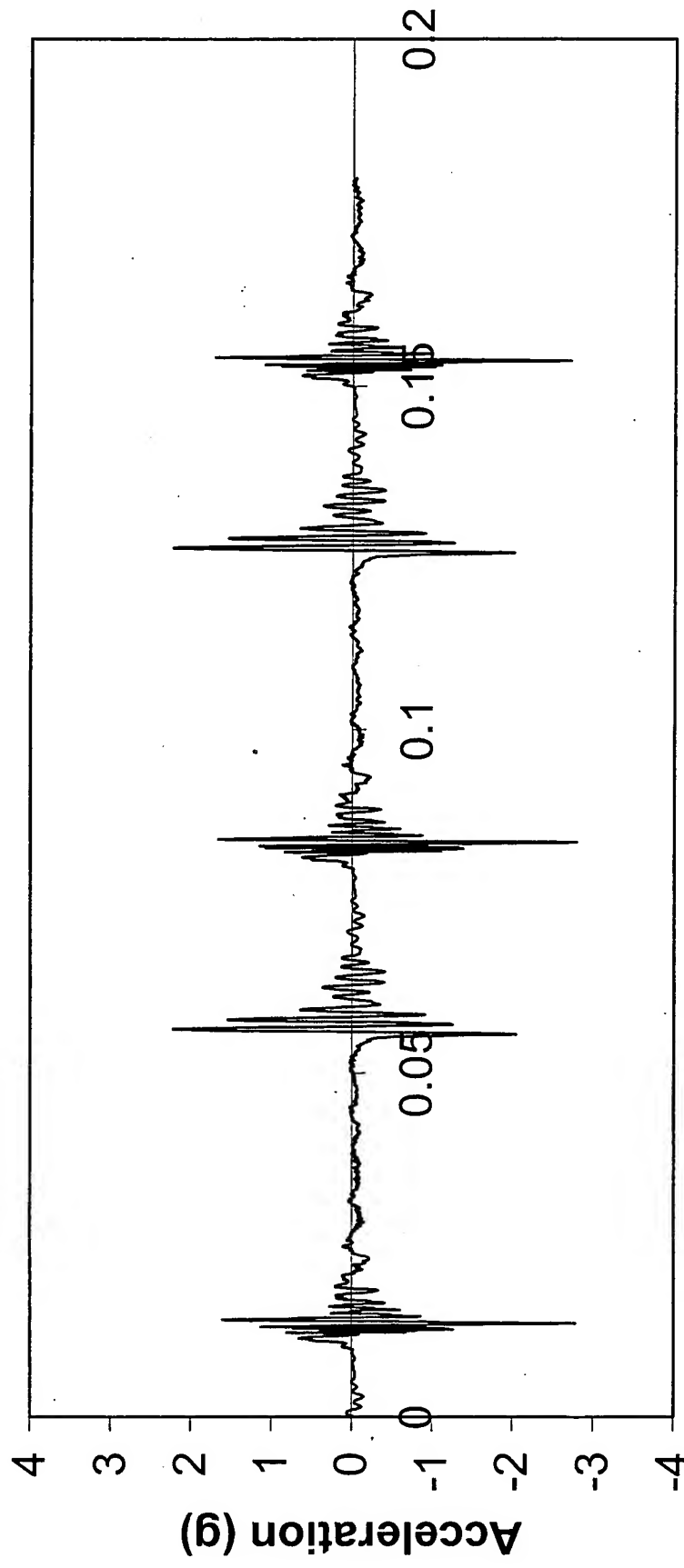


Time (s)

— Y-axis

Figure 8G

**8008 nozzle 15 Hz 60% dc clogged to 47% flow
300 kPa**



Time (s)

— Z-axis

Figure 8H

**8008 nozzle 15 Hz 60% dc clogged to 47% flow
on periods**

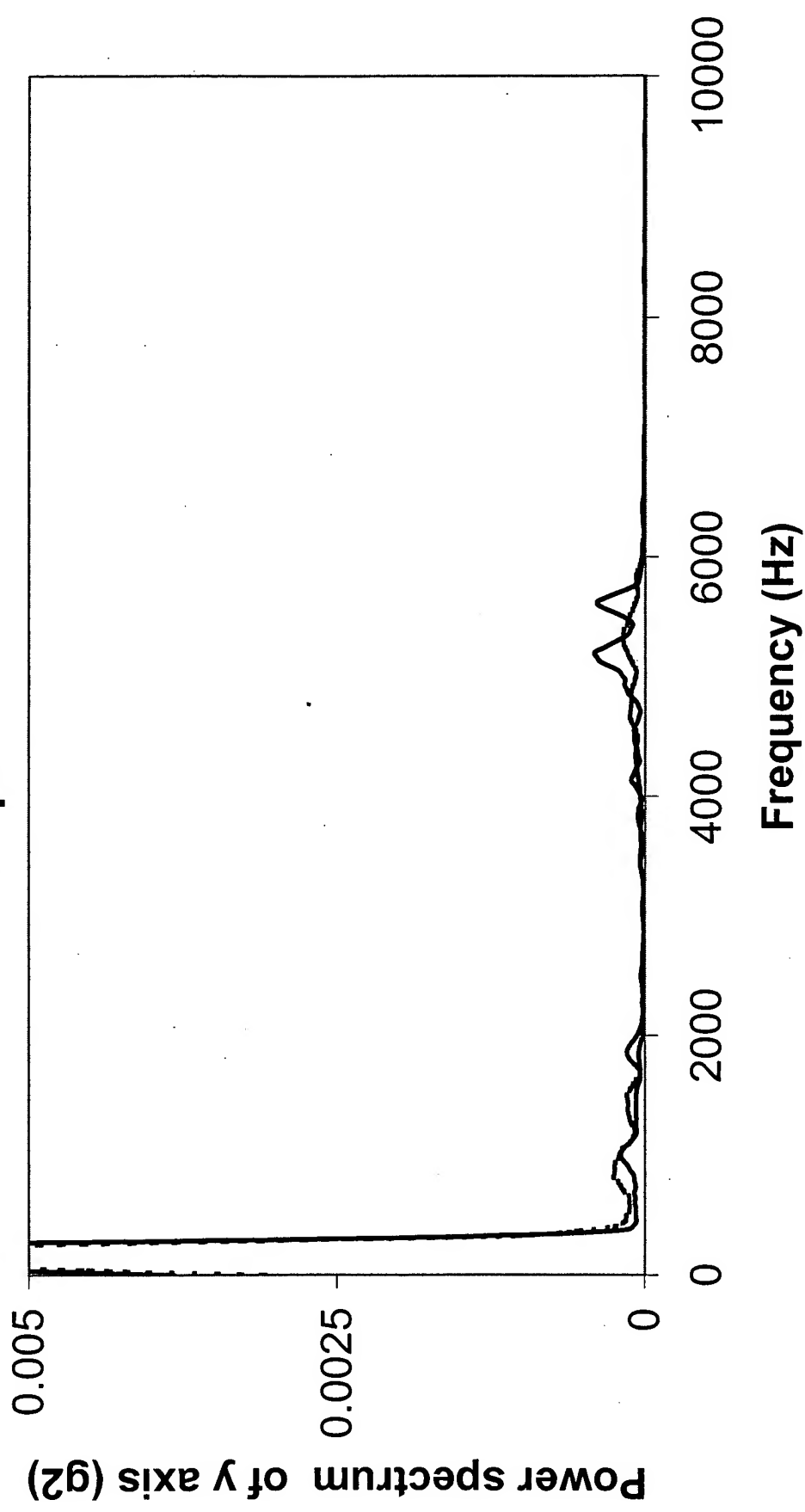


Figure 8I

**8008 nozzle 15 Hz 60% dc clogged to 47% flow
off periods**

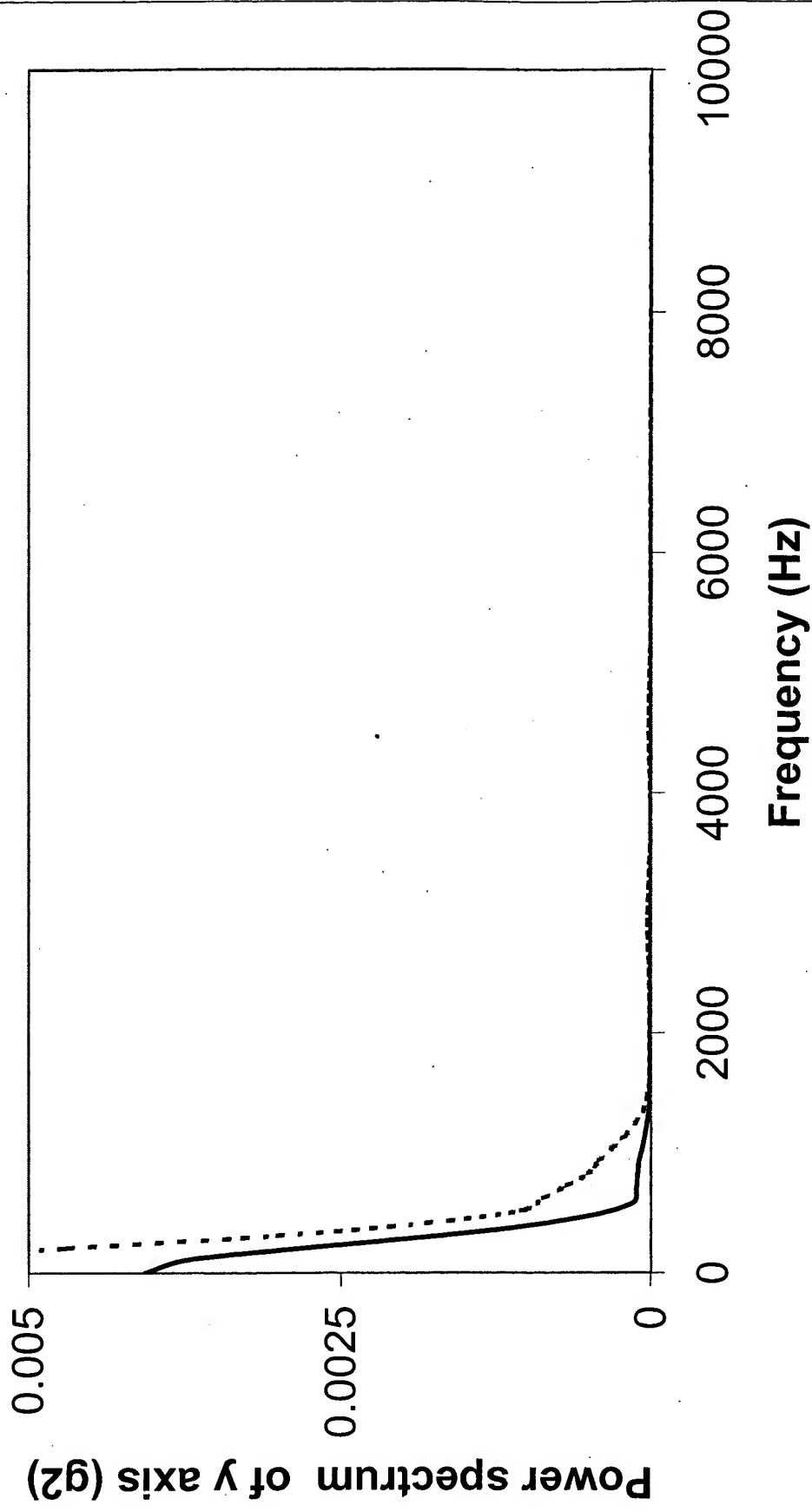


Figure 8J

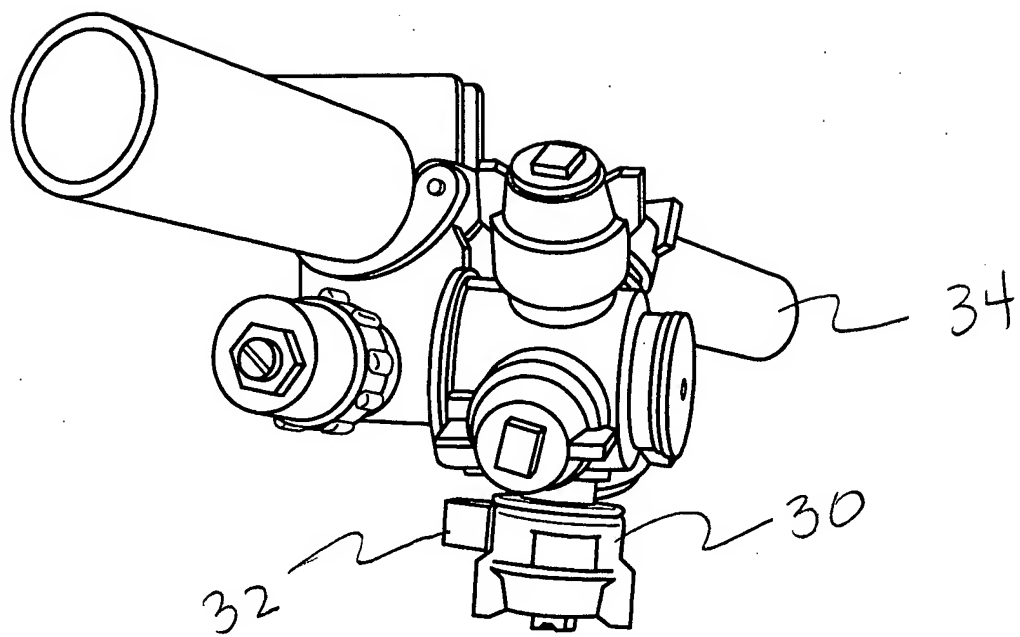


FIG. 9

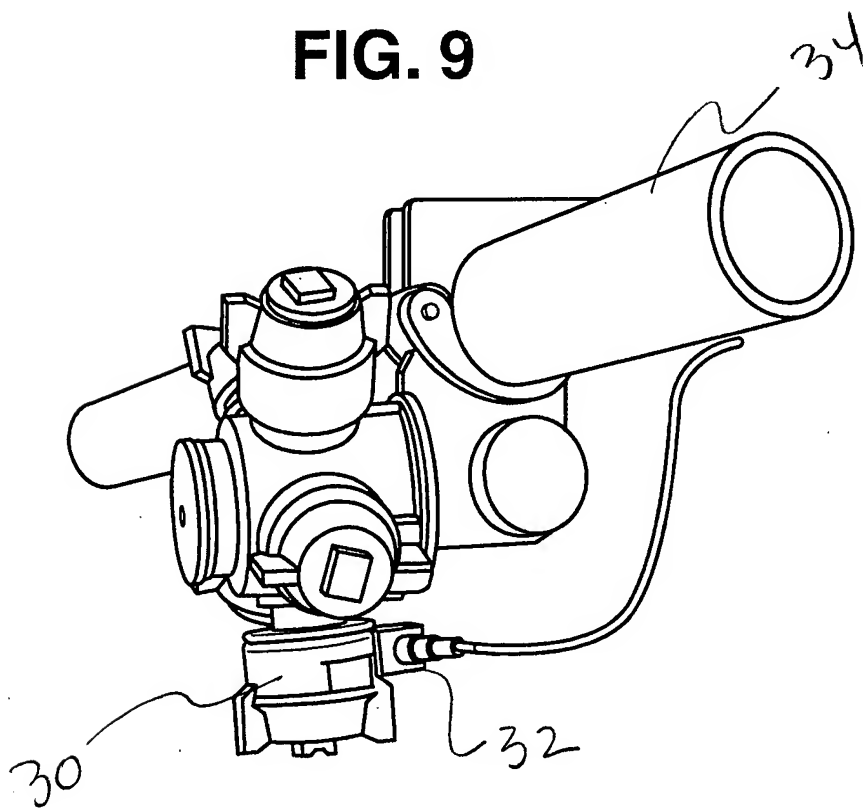
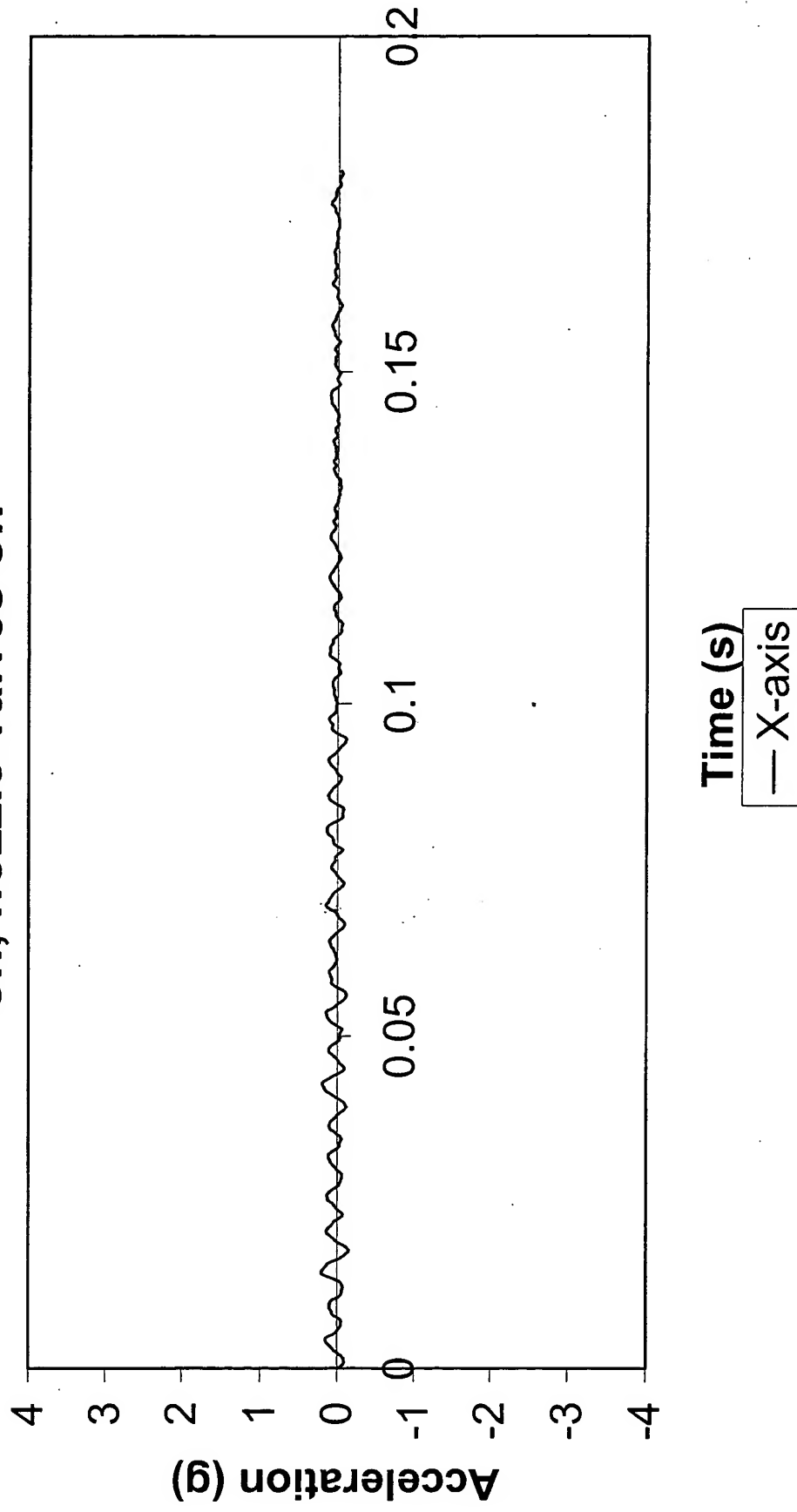


FIG. 10

Self propeller sprayer, engine full throttle, pump on, nozzle valves off

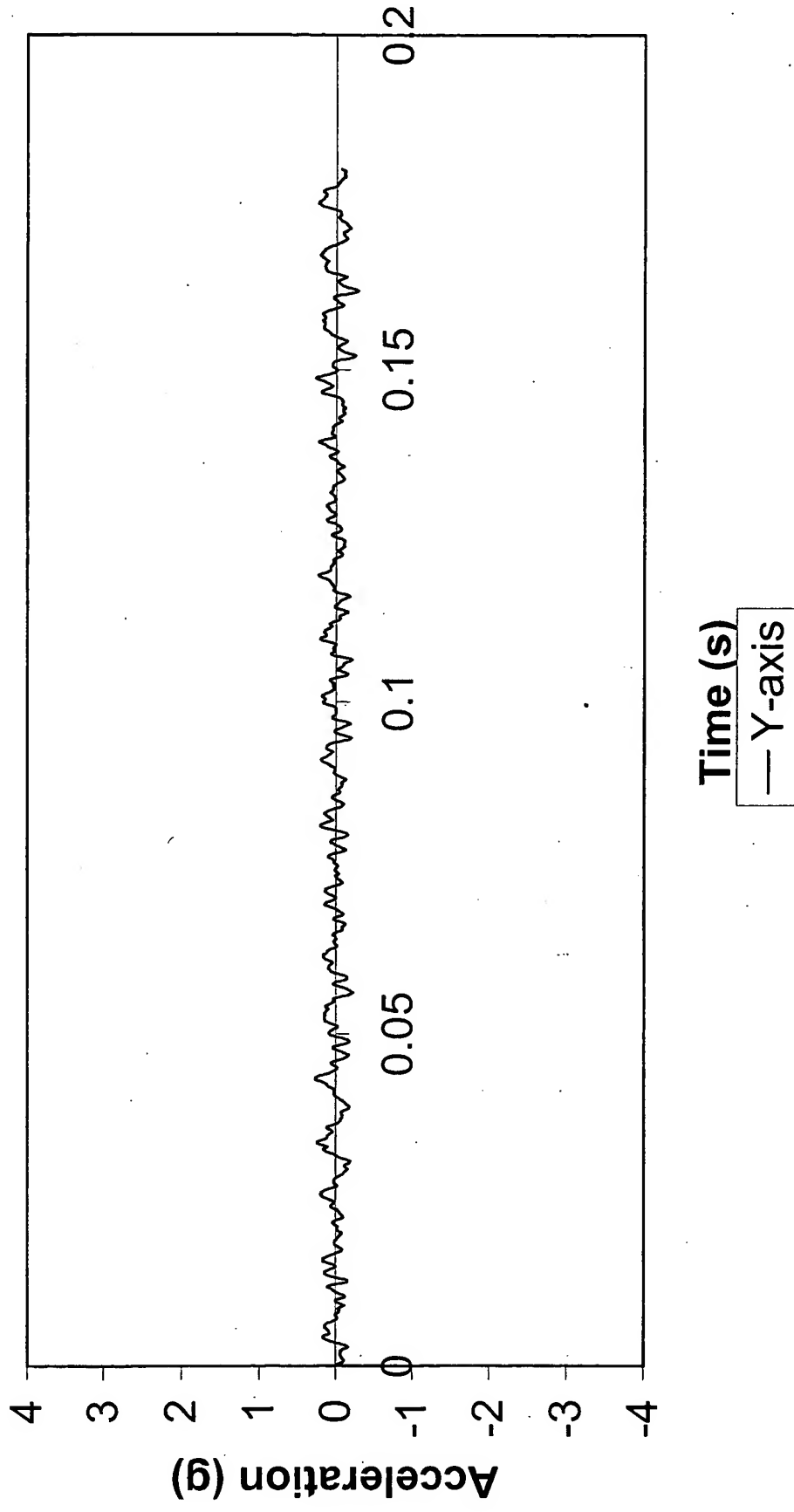


Time (s)

— X-axis

Figure 11A

Self propeller sprayer, engine full throttle, pump on, nozzle valves off



Time (s)

— Y-axis

Figure 11B

Self propeller sprayer, engine full throttle, pump on, nozzle valves off

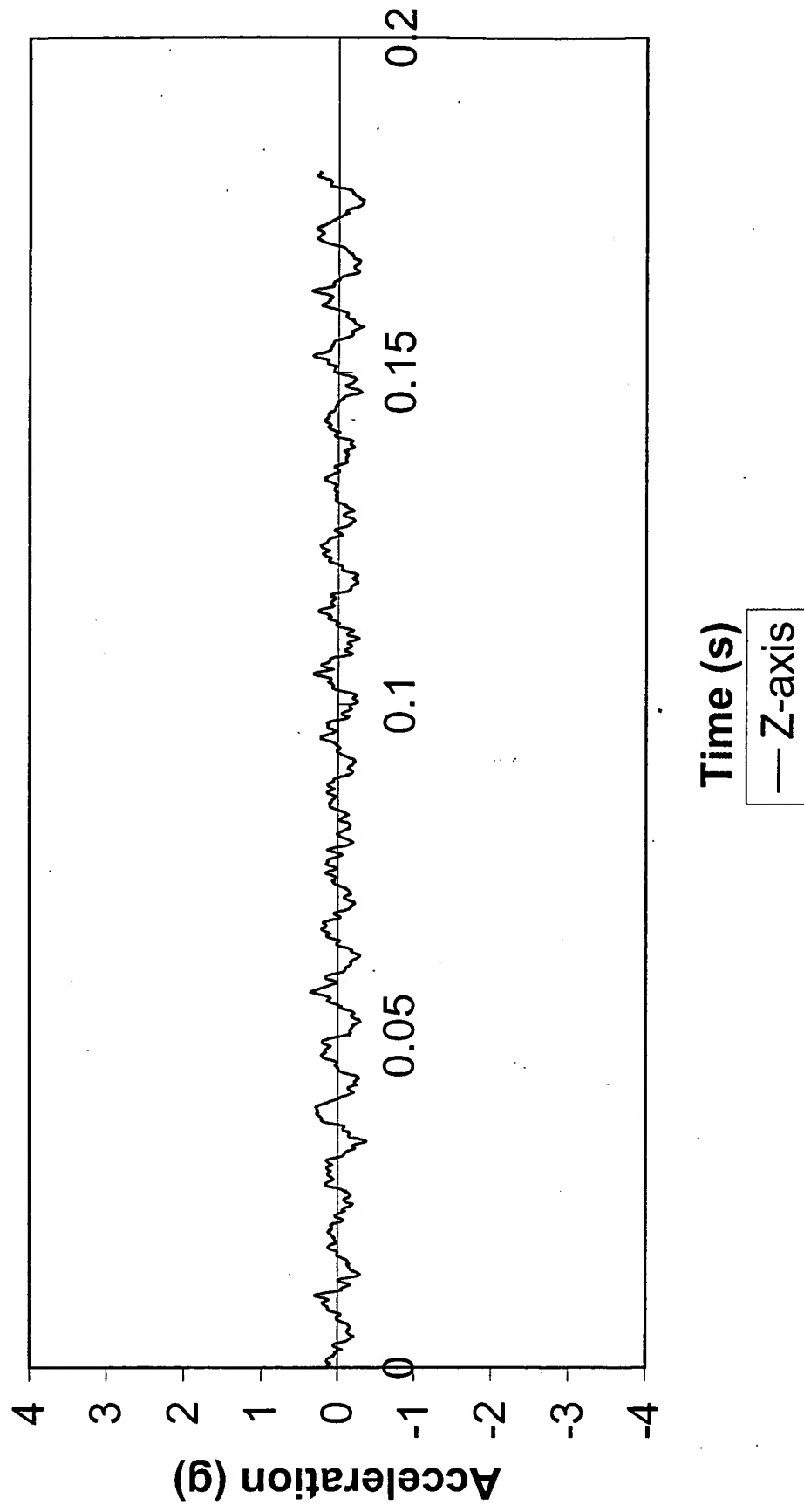
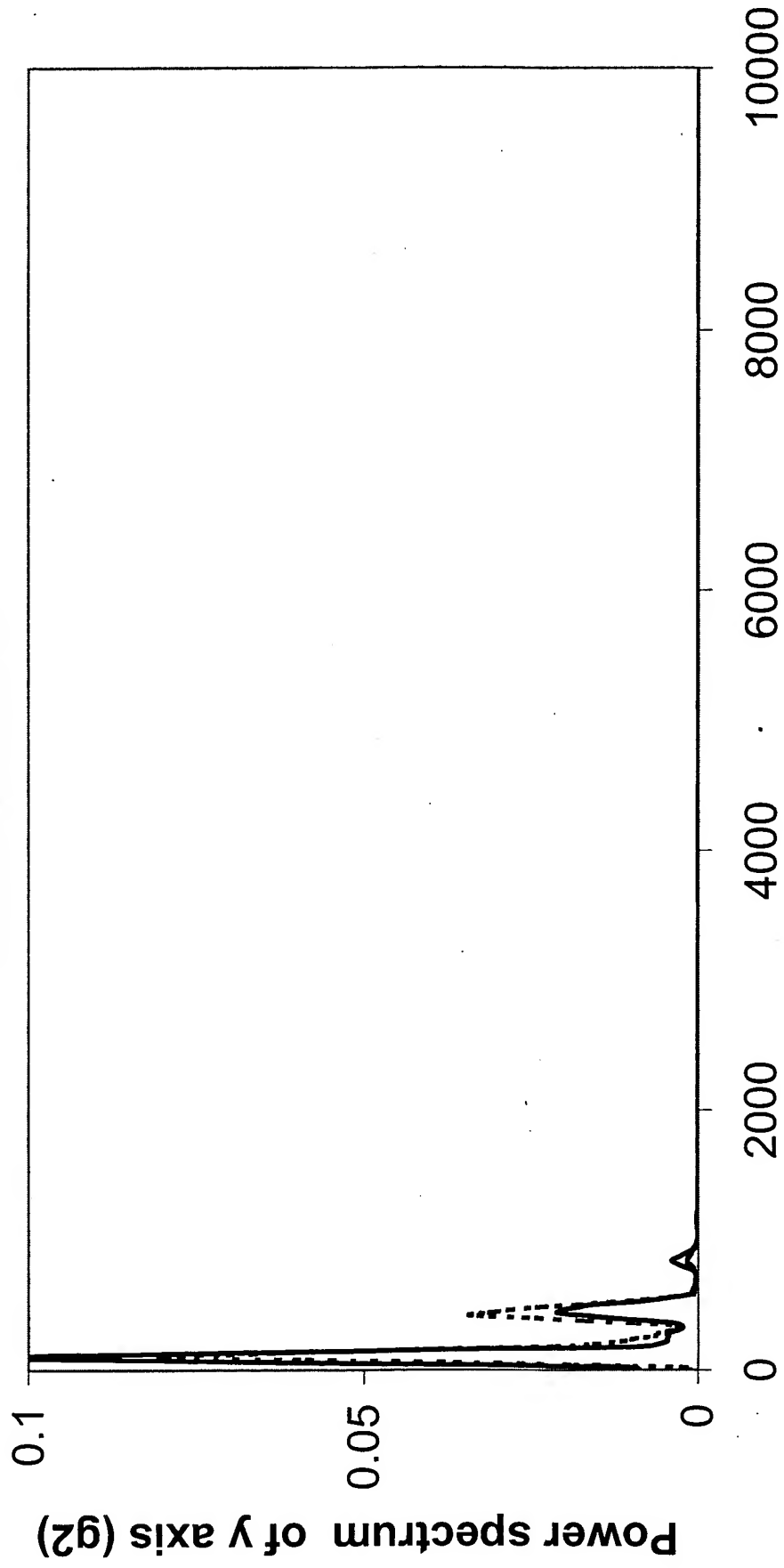


Figure 11C

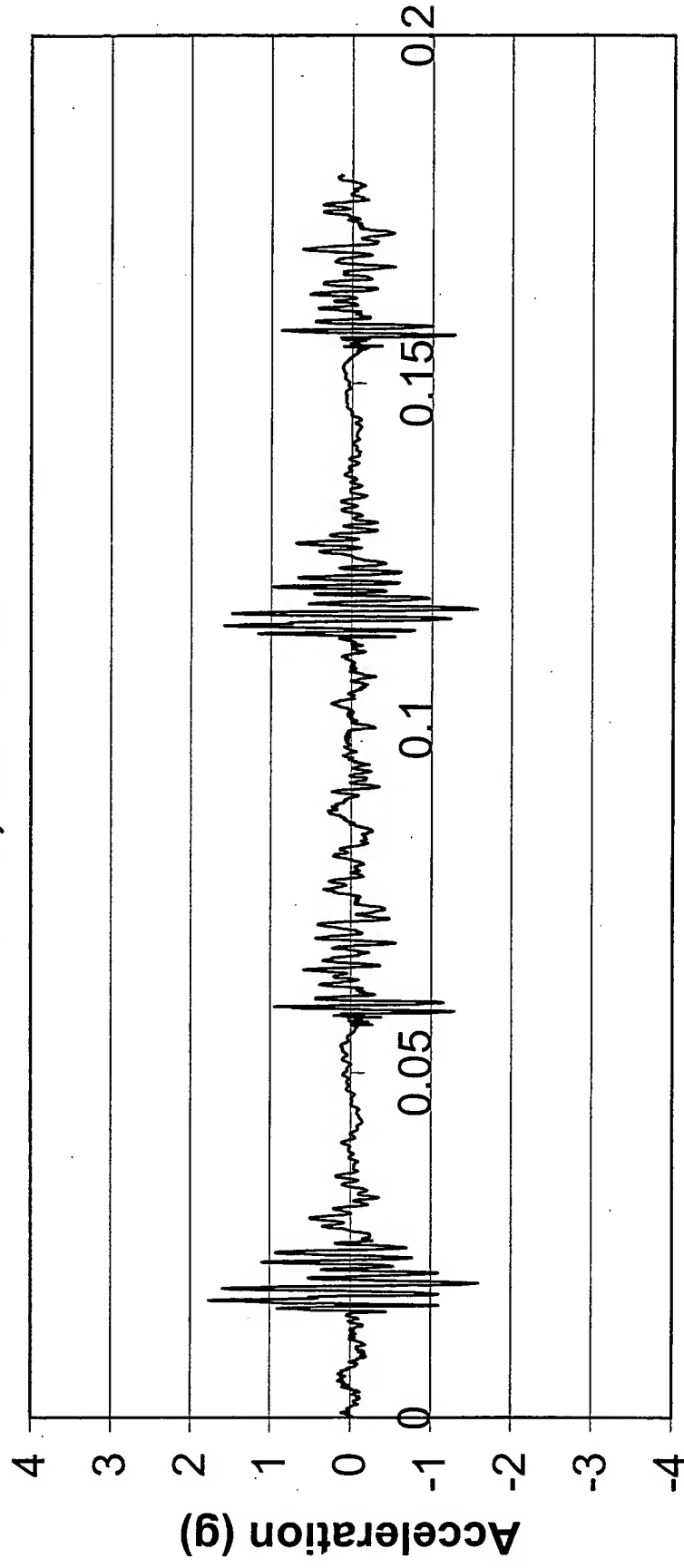
**Self propeller sprayer, engine full throttle, pump on,
nozzle valves off**



Frequency (Hz)

Figure 11D

**Self propelled sprayer, full throttle, 8008 nozzle,
10 Hz, 300 kPa**

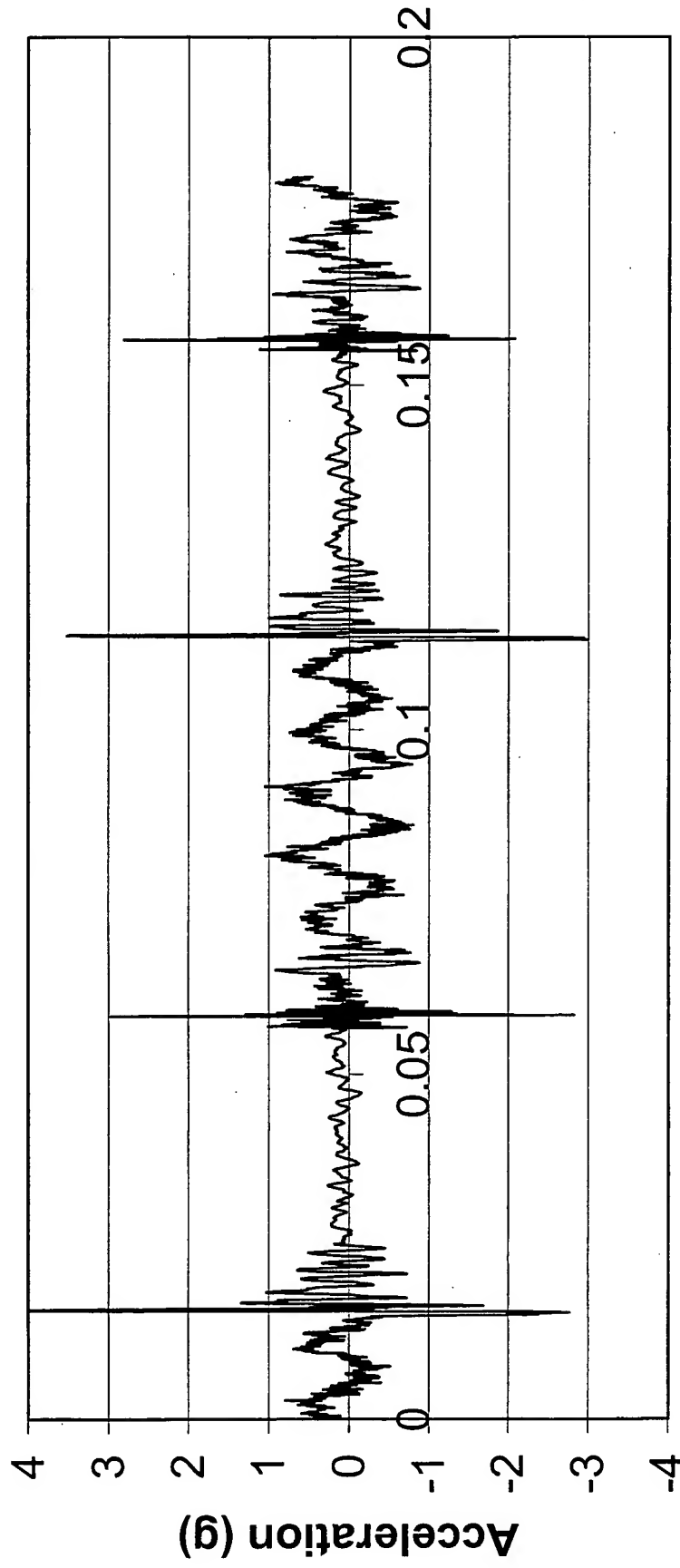


Time (s)

— X-axis

Figure 12A

**Self propelled sprayer, full throttle, 8008 nozzle,
10 Hz, 300 kPa**

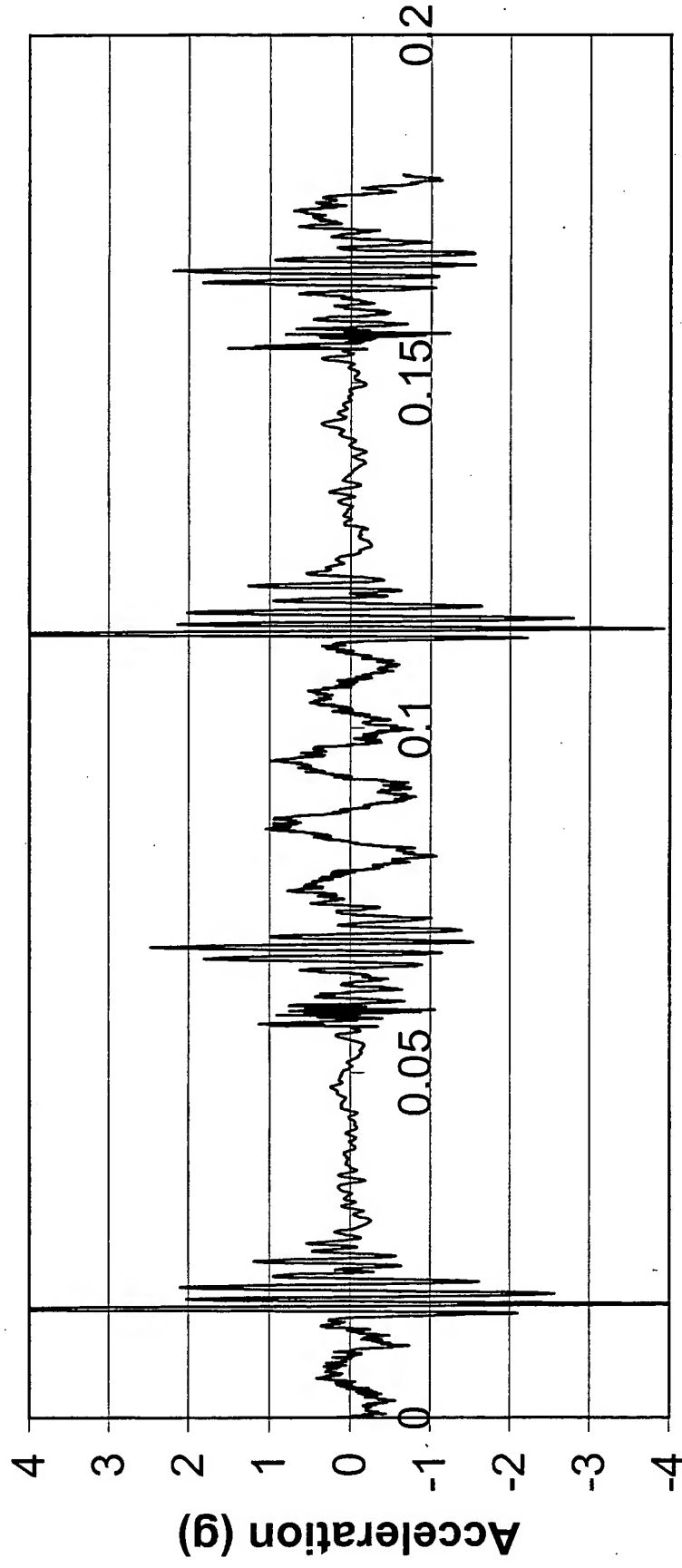


Time (s)

— Y-axis

Figure 12B

**Self propelled sprayer, full throttle, 8008 nozzle,
10 Hz, 300 kPa**

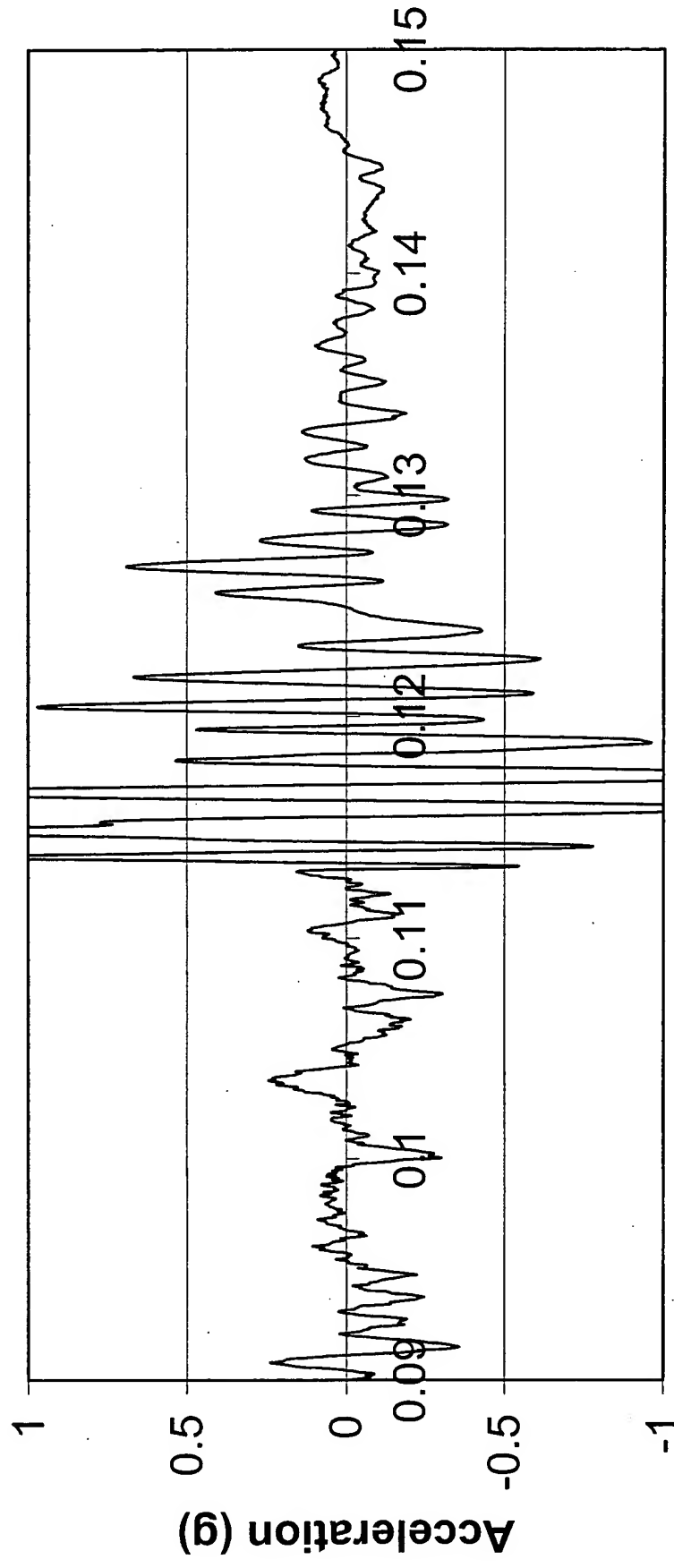


Time (s)

— Z-axis

Figure 12C

**Self propelled sprayer, full throttle, 8008 nozzle,
10 Hz, 300 kPa**



Time (s)

— X-axis

Figure 12D

**Self propelled sprayer, full throttle, 8008 nozzle,
10 Hz, 300 kPa**

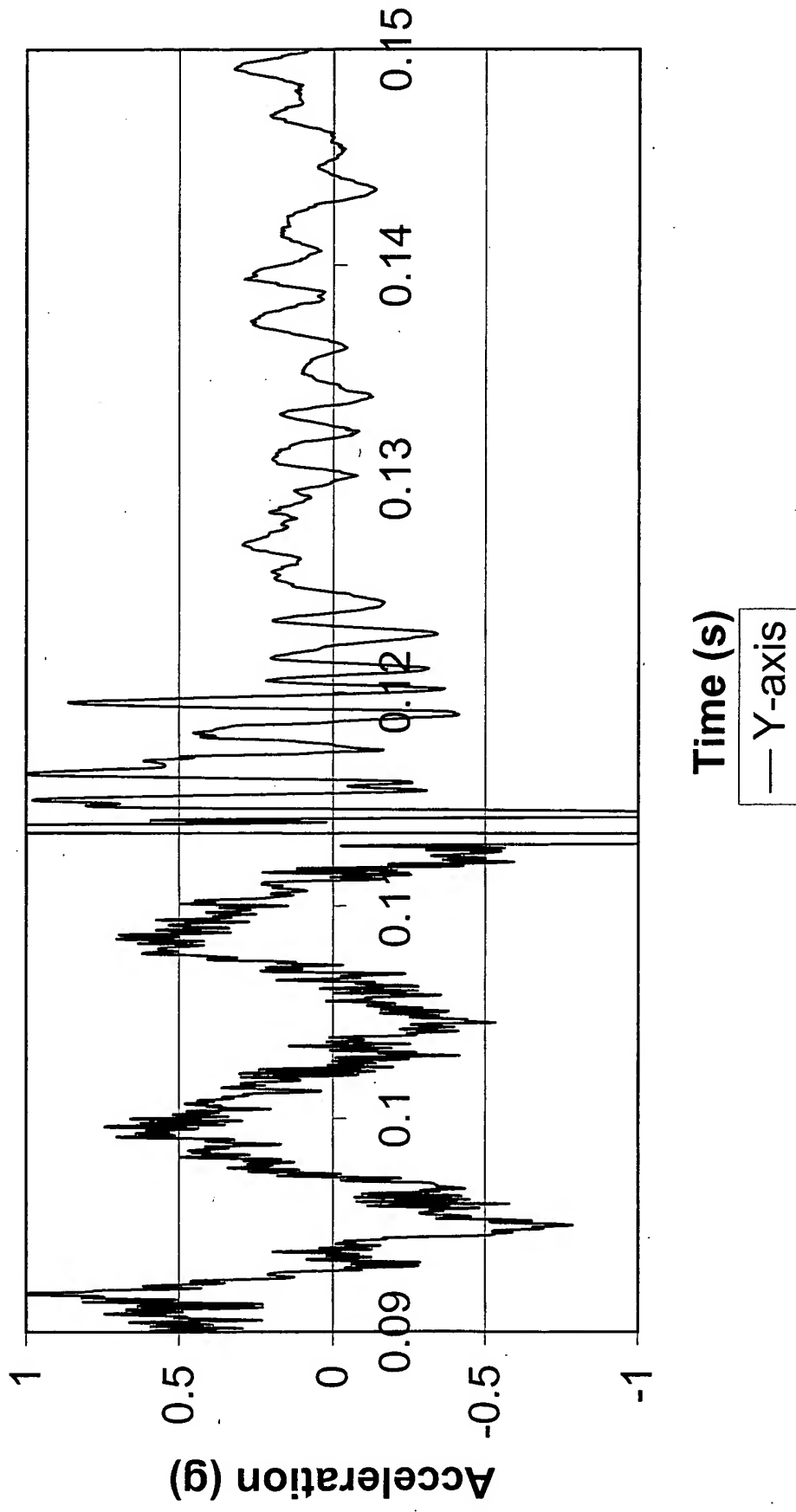


Figure 12E

**Self propelled sprayer, full throttle, 8008 nozzle,
10 Hz, 300 kPa**

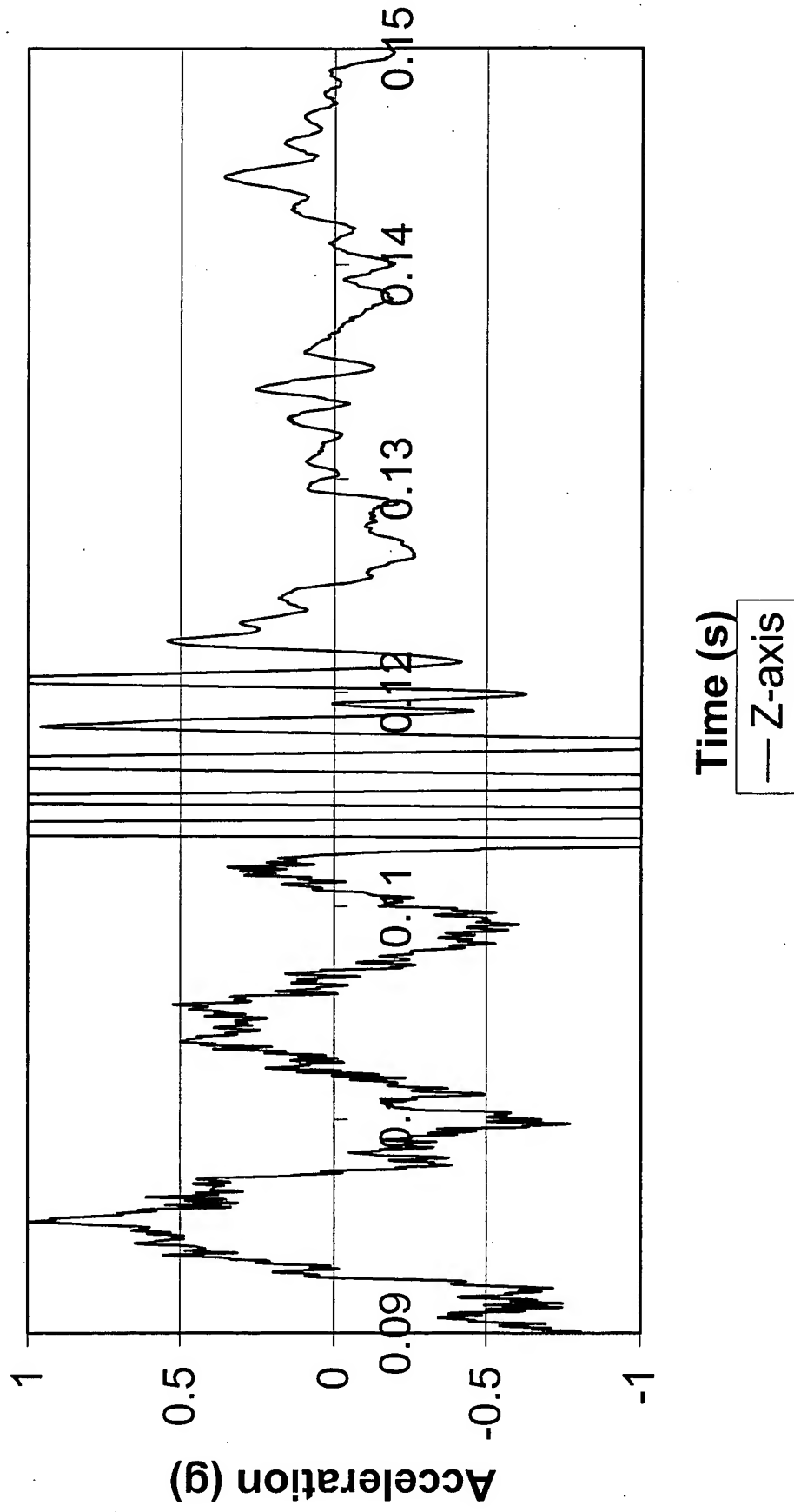
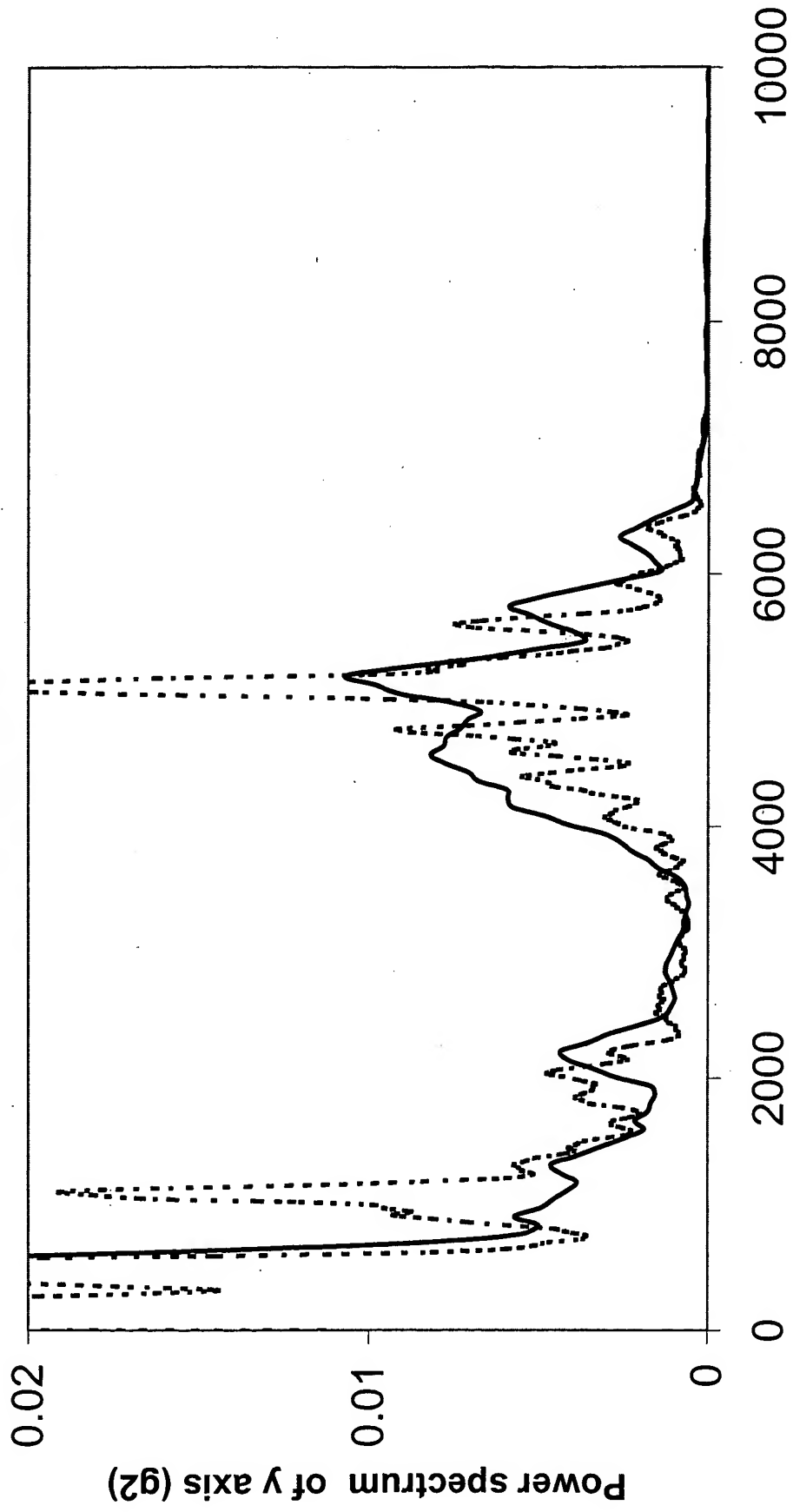


Figure 12F

Self propelled sprayer, full throttle, 8008 nozzle, 10 Hz, 300 kPa

on periods



Frequency (Hz)

Figure 12G

Self propelled sprayer, full throttle, 8008 nozzle, 10 Hz, 300 kPa
off periods

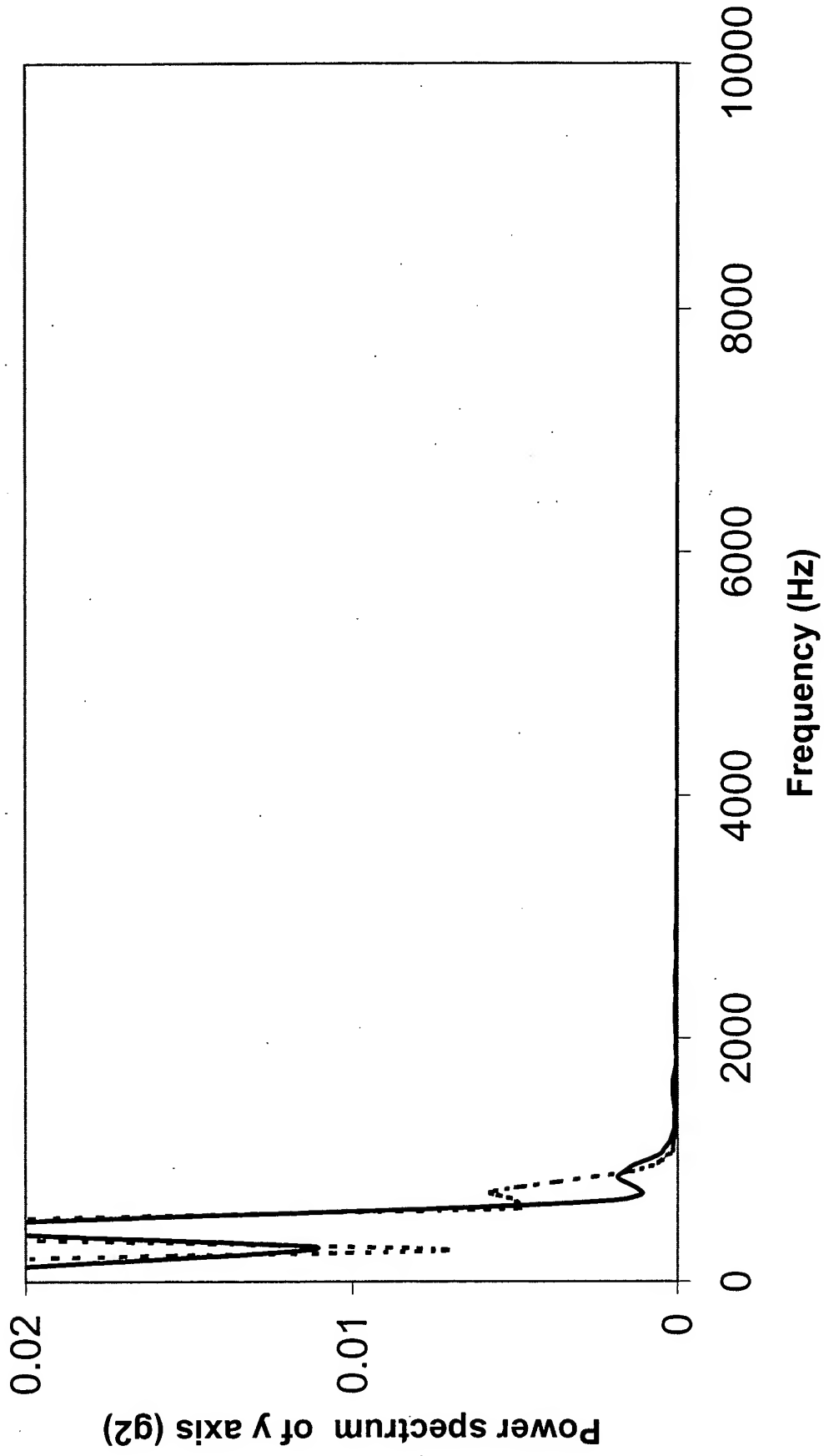
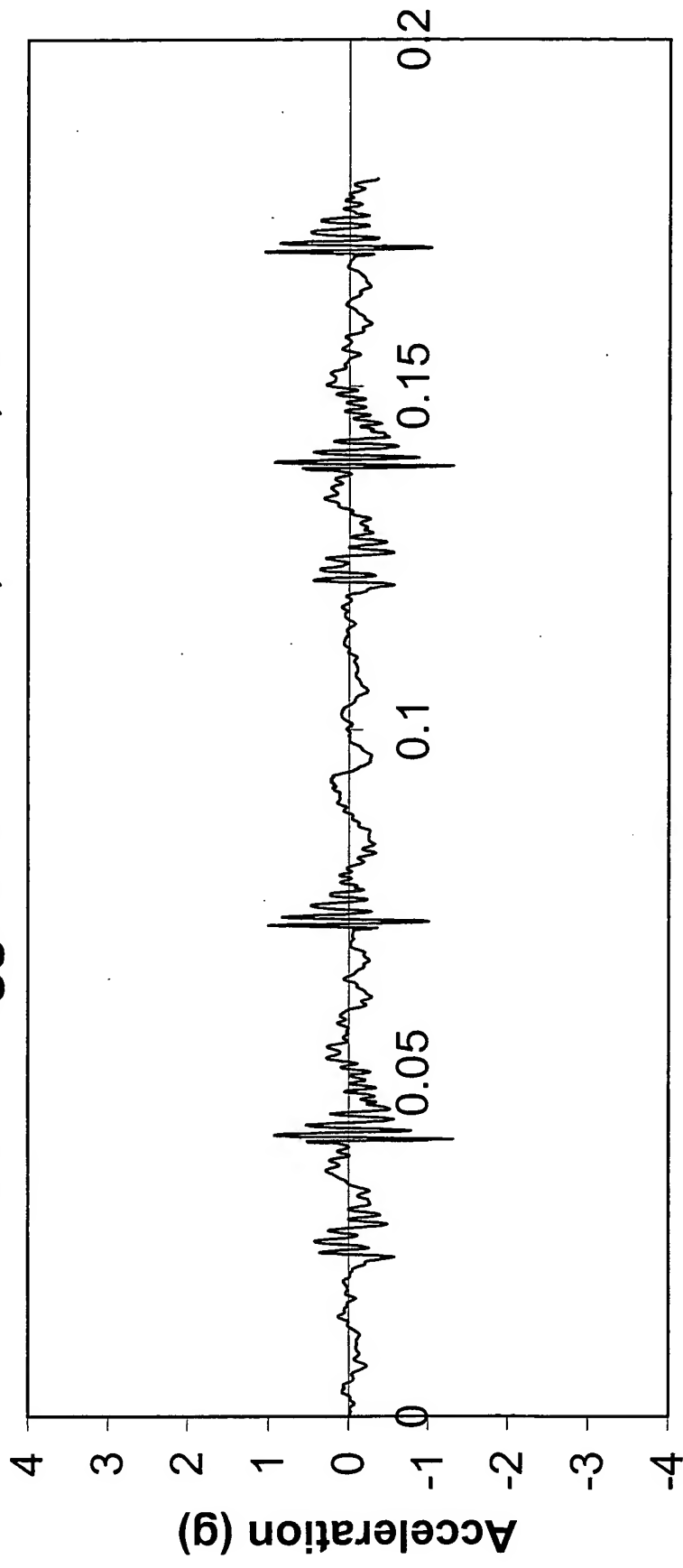


Figure 12H

**Self propelled sprayer, full throttle,
8008 nozzle clogged to 0% flow, 10 Hz, 300 kPa**

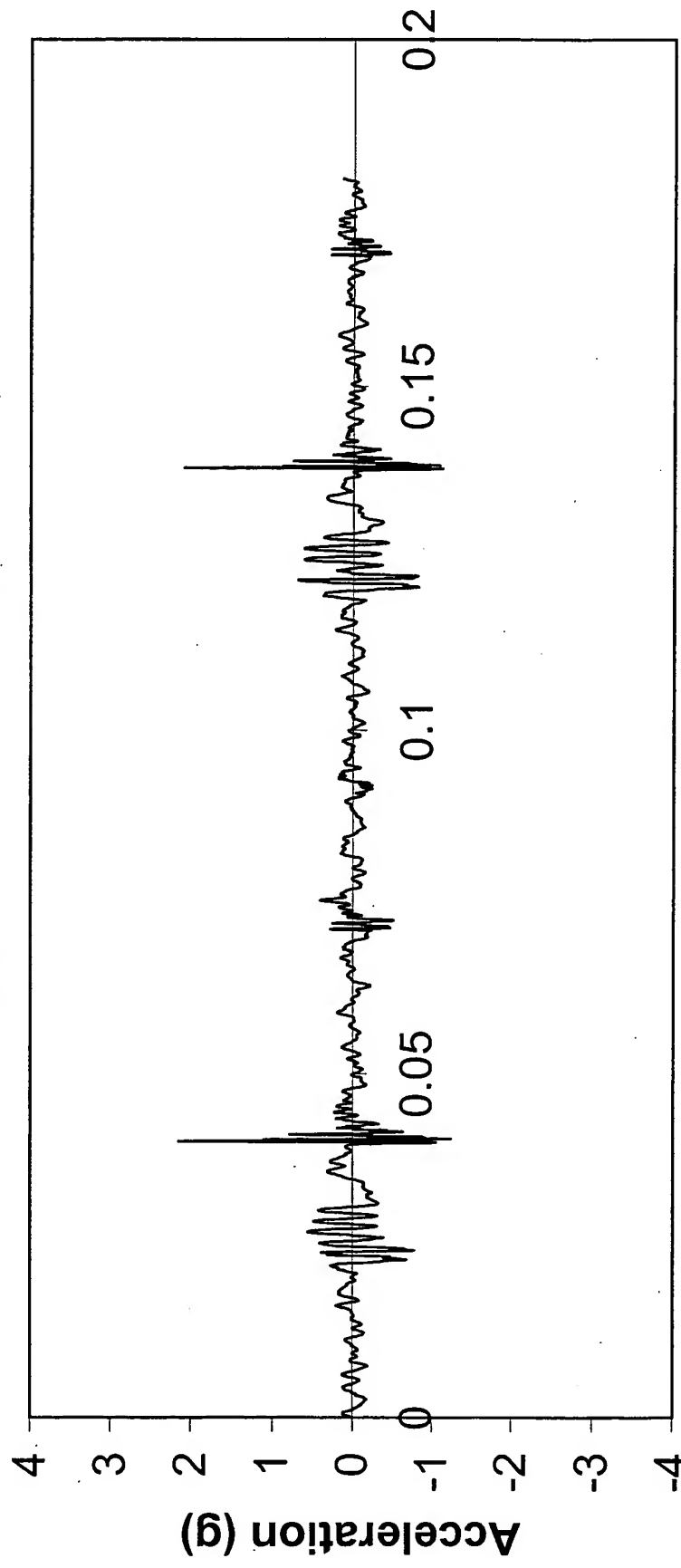


Time (s)

— X-axis

Figure 13A

**Self propelled sprayer, full throttle,
8008 nozzle clogged to 0% flow, 10 Hz, 300 kPa**

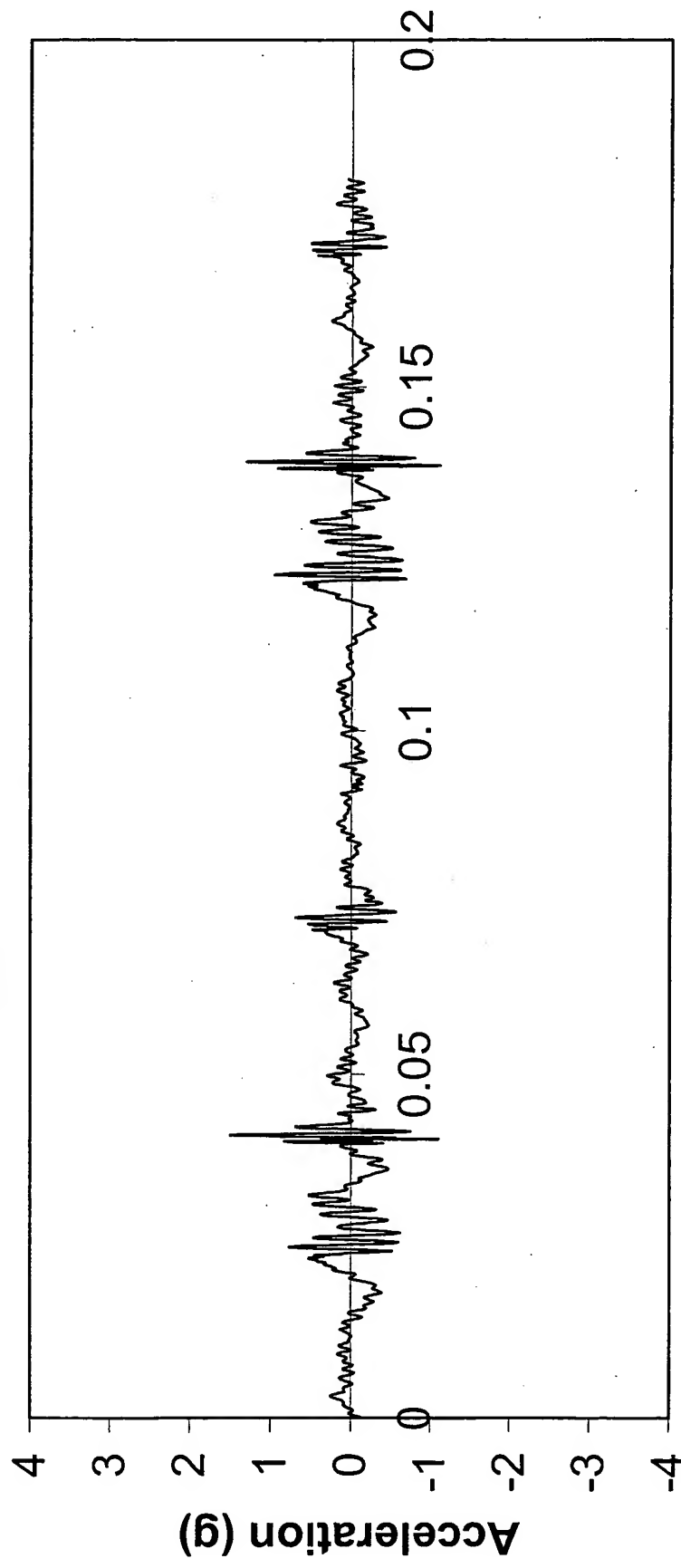


Time (s)

— Y-axis

Figure 13B

**Self propelled sprayer, full throttle,
8008 nozzle clogged to 0% flow, 10 Hz, 300 kPa**

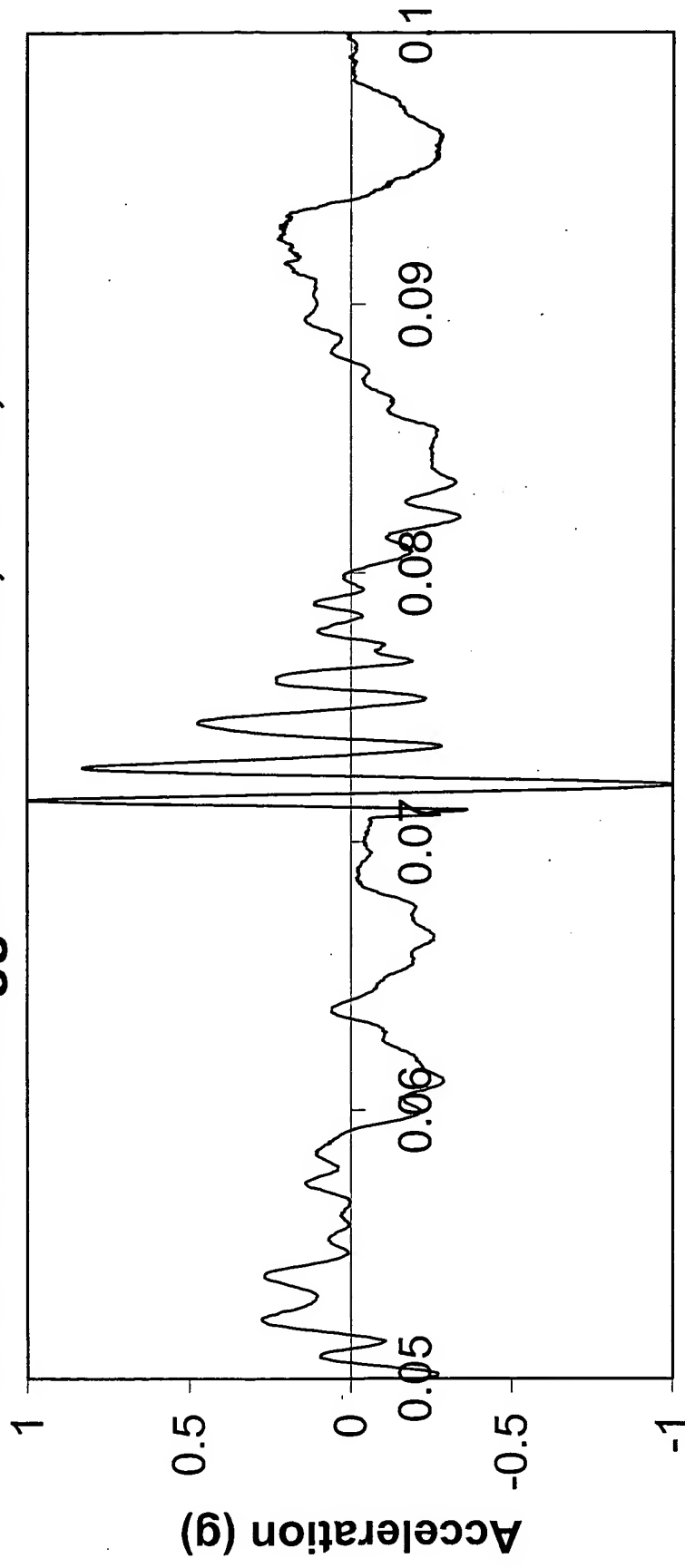


Time (s)

— Z-axis

Figure 13C

**Self propelled sprayer, full throttle,
8008 nozzle clogged to 0% flow, 10 Hz, 300 kPa**



Time (s)

— X-axis

Figure 13D

**Self propelled sprayer, full throttle,
8008 nozzle clogged to 0% flow, 10 Hz, 300 kPa**

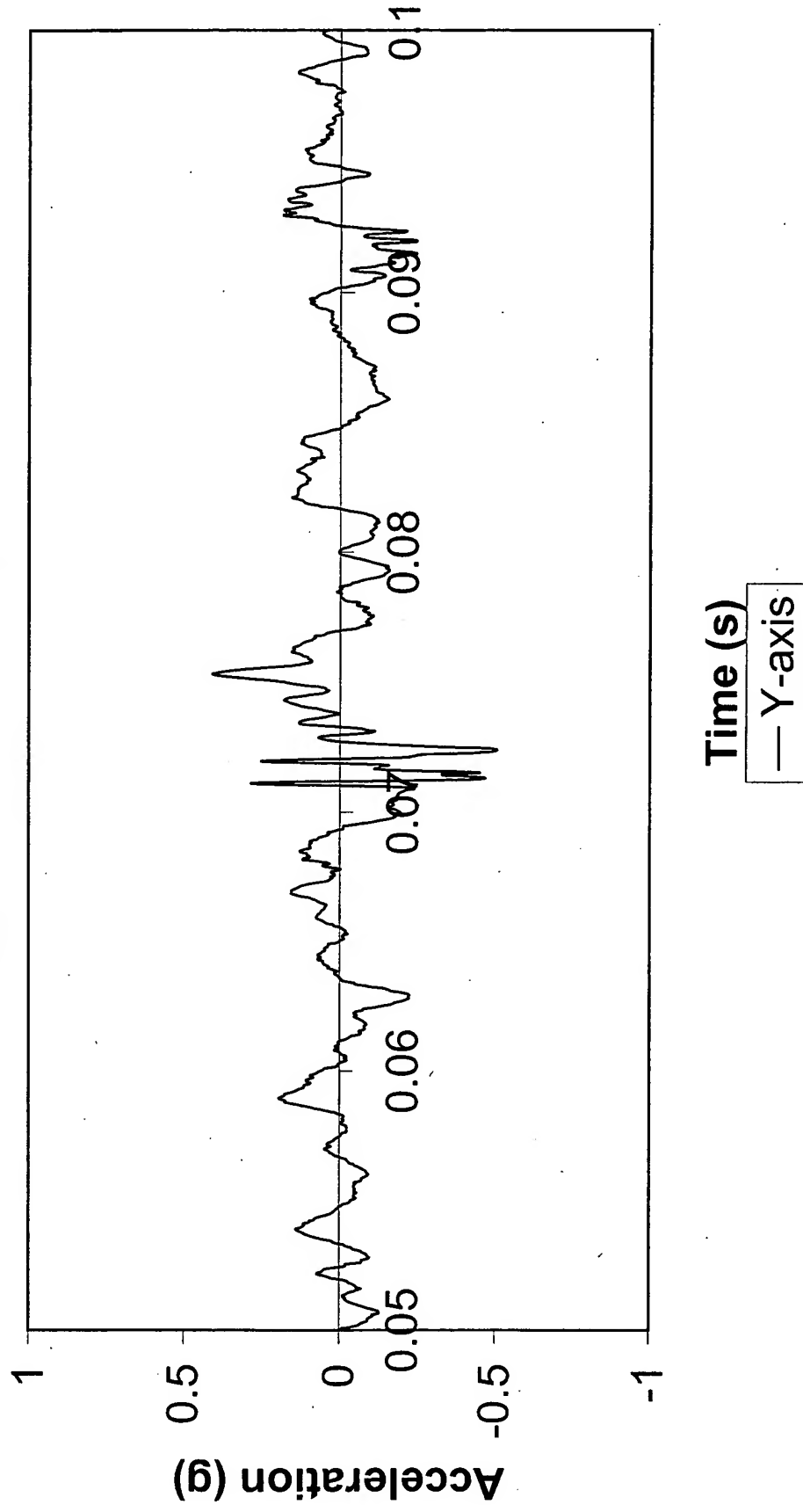
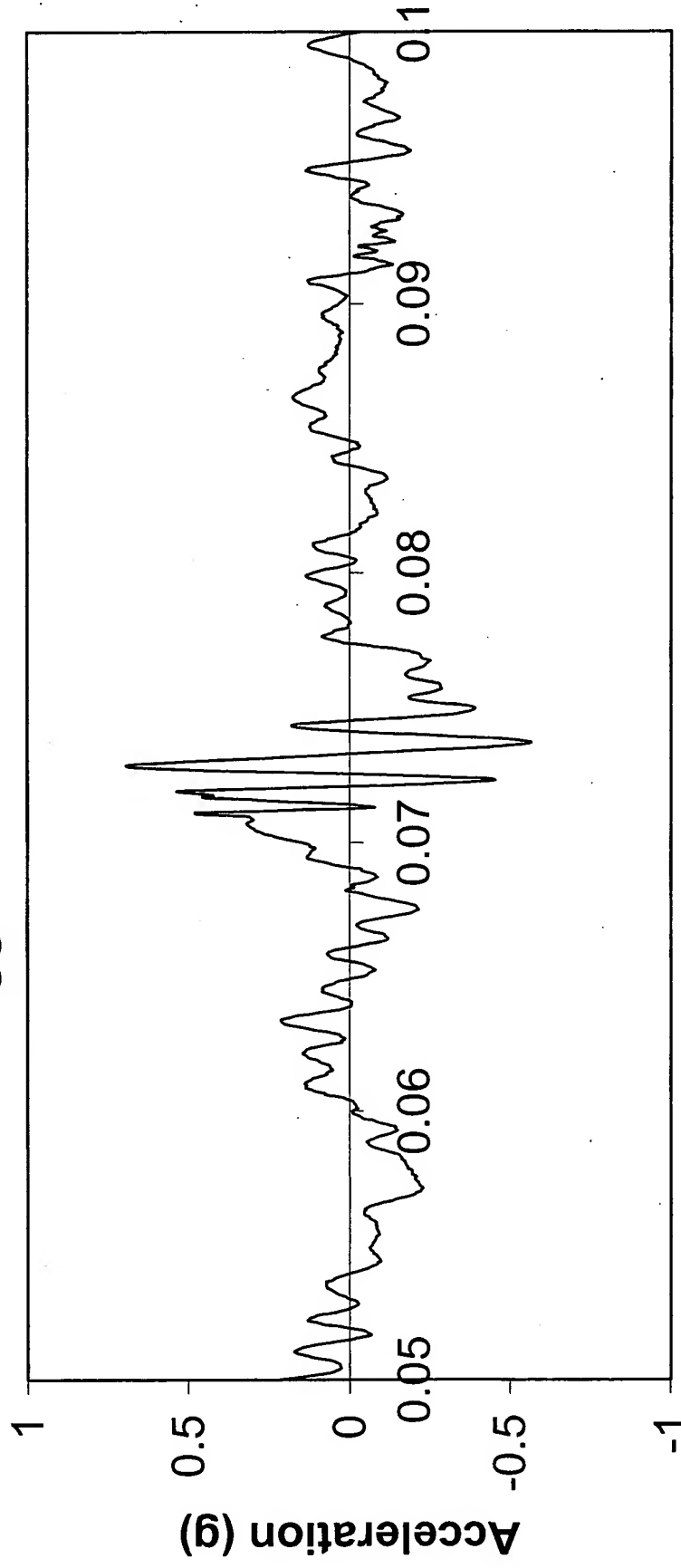


Figure 13E

**Self propelled sprayer, full throttle,
8008 nozzle clogged to 0% flow, 10 Hz, 300 kPa**

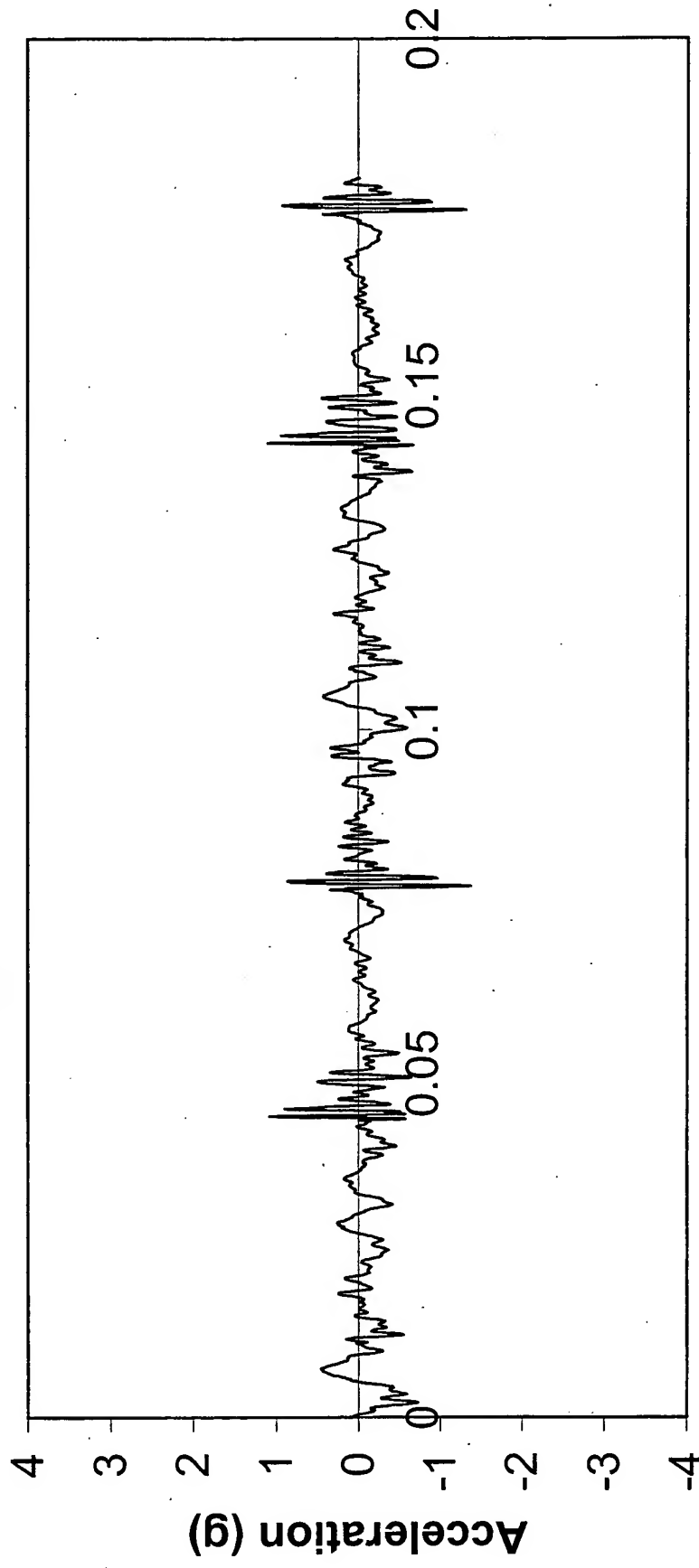


Time (s)

— Z-axis

Figure 13F

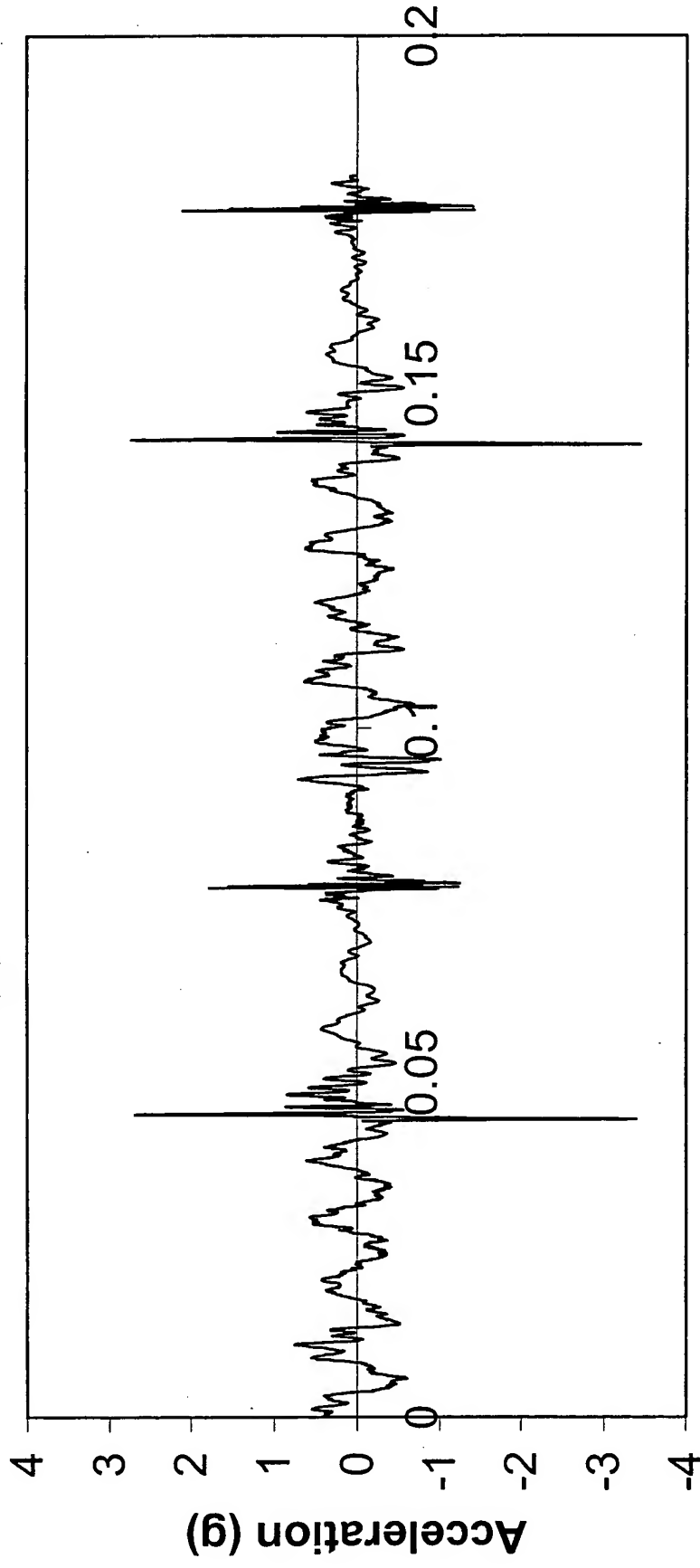
**Self propelled sprayer, full throttle,
8008 nozzle clogged to 47% flow, 10 Hz, 300 kPa**



Time (s)
— X-axis

Figure 14A

**Self propelled sprayer, full throttle,
8008 nozzle clogged to 47% flow, 10 Hz, 300 kPa**

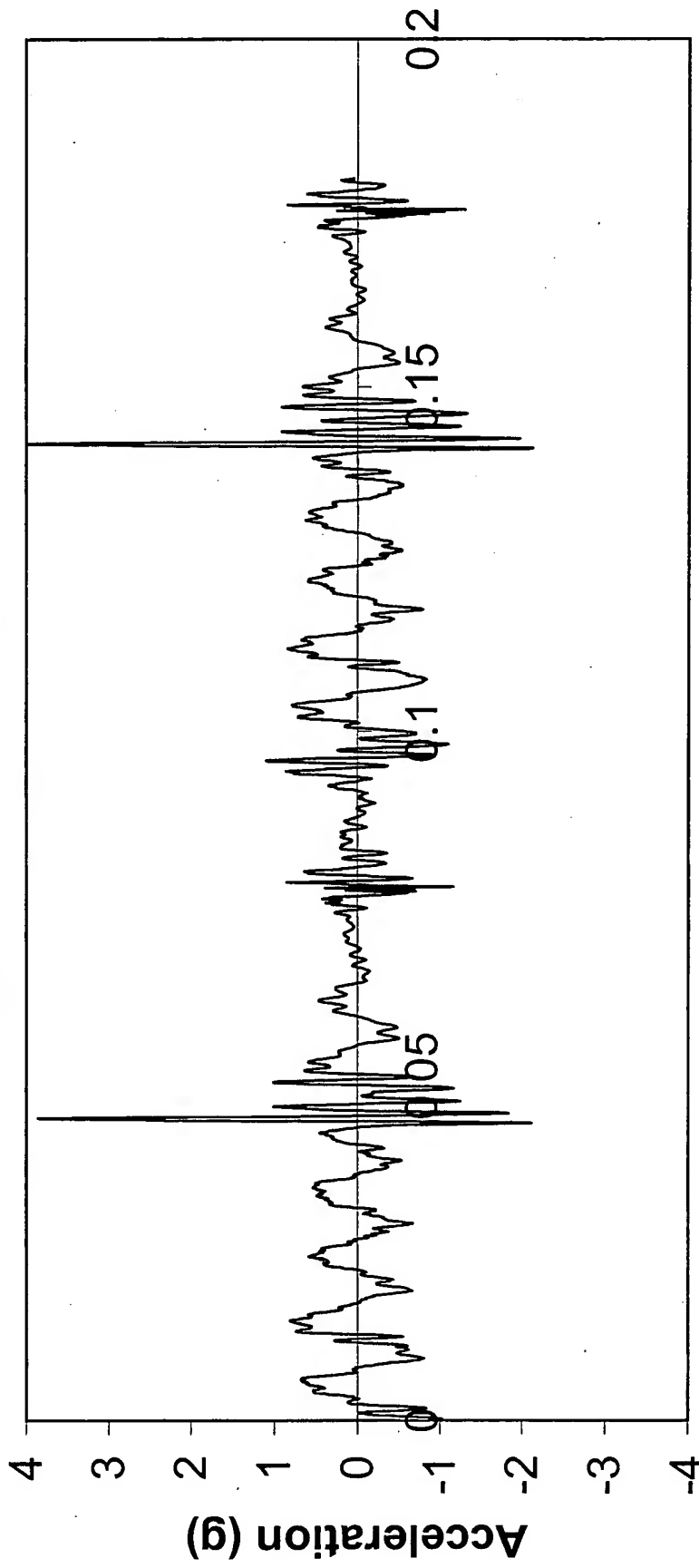


Time (s)

— Y-axis

Figure 14B

**Self propelled sprayer, full throttle,
8008 nozzle clogged to 47% flow, 10 Hz, 300 kPa**



Time (s)

— Z-axis

Figure 14C

**Self propelled sprayer, full throttle,
8008 nozzle clogged to 47% flow, 10 Hz, 300 kPa**

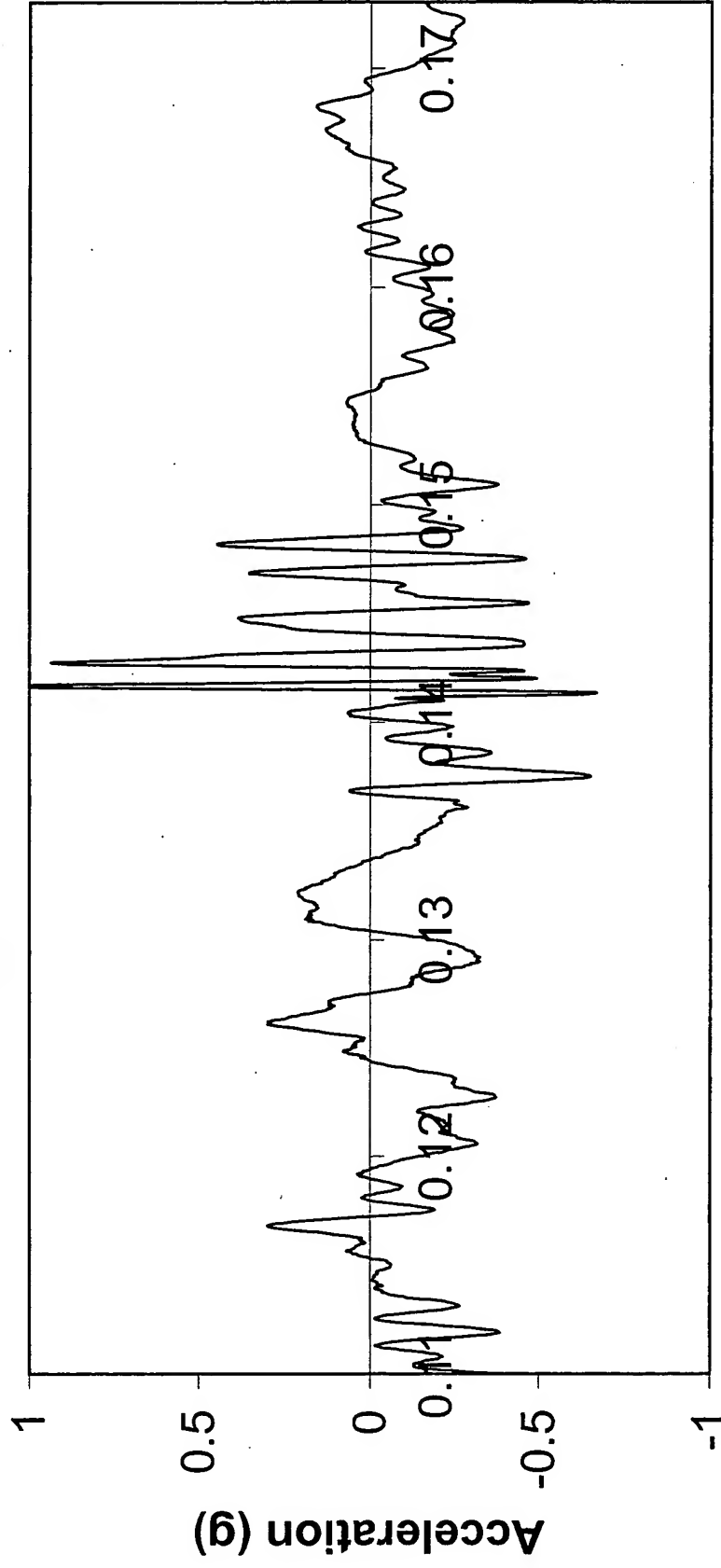
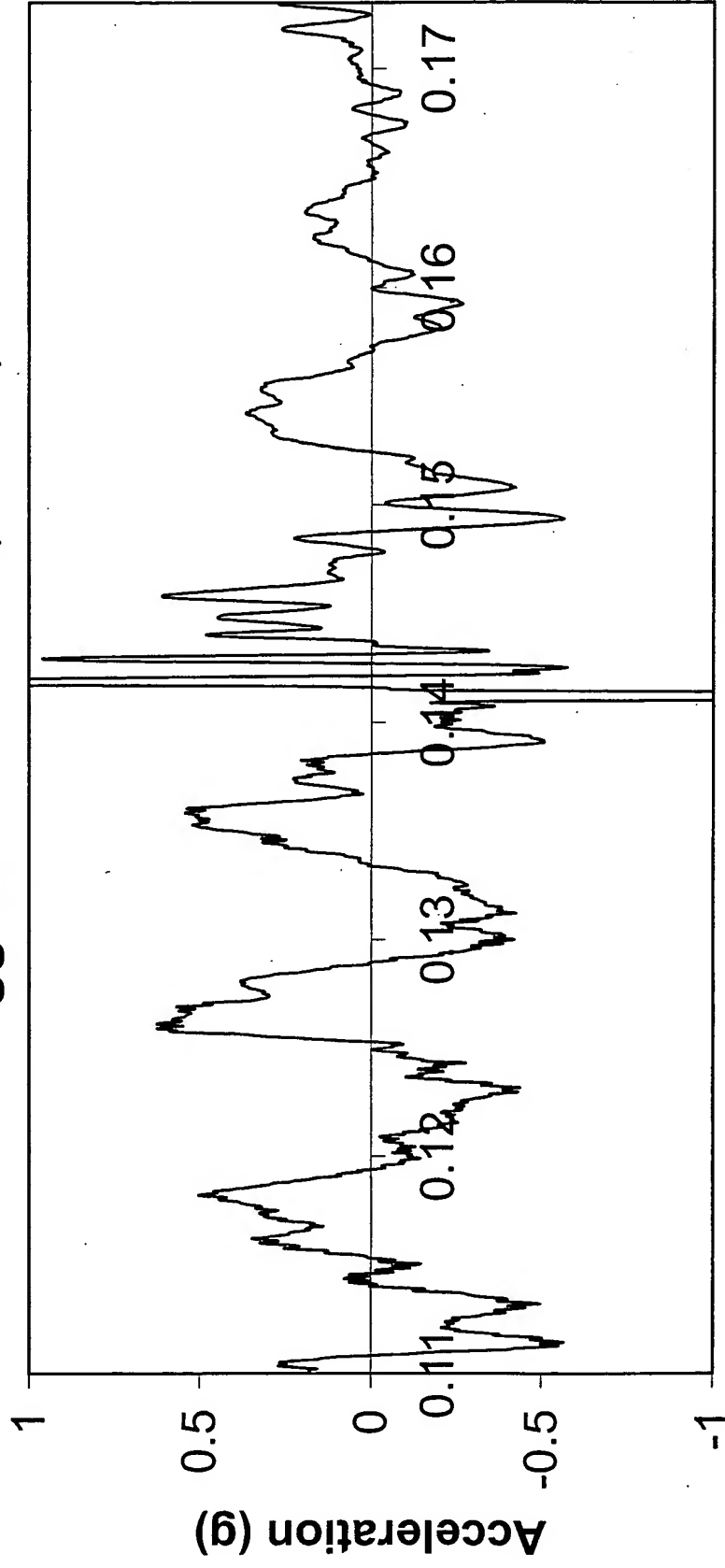


Figure 14D

**Self propelled sprayer, full throttle,
8008 nozzle clogged to 47% flow, 10 Hz, 300 kPa**

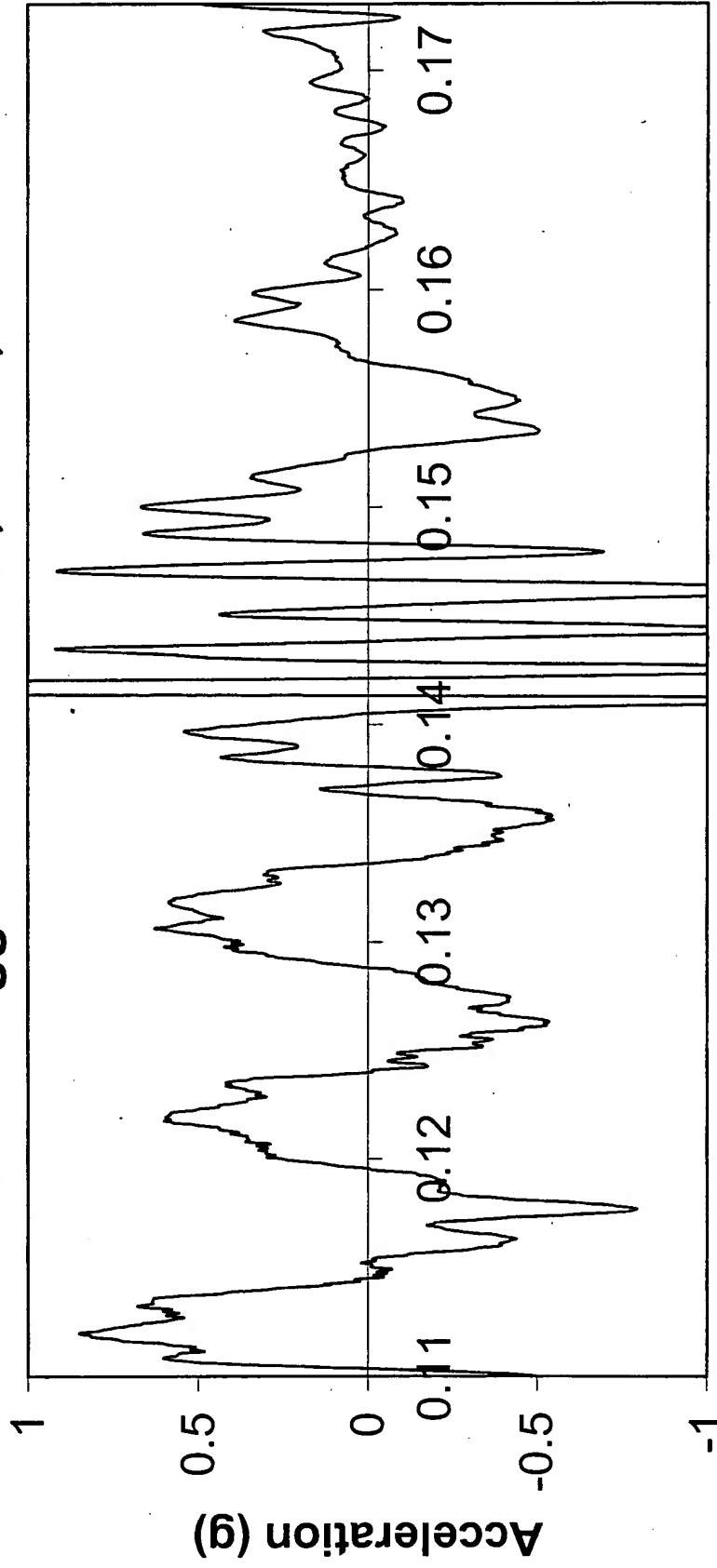


Time (s)

— Y-axis

Figure 14E

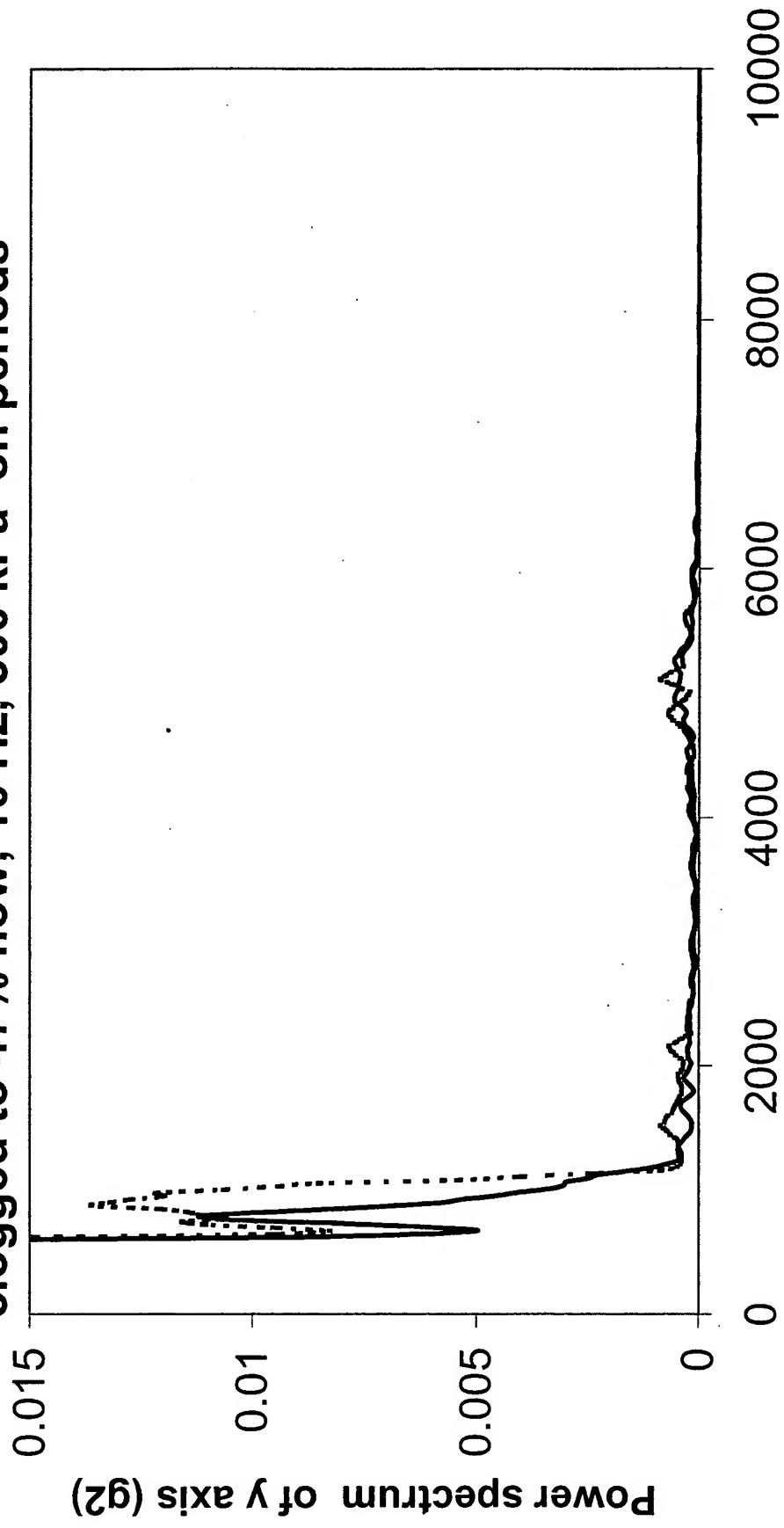
**Self propelled sprayer, full throttle,
8008 nozzle clogged to 47% flow, 10 Hz, 300 kPa**



Time (s)
— Z-axis

Figure 14F

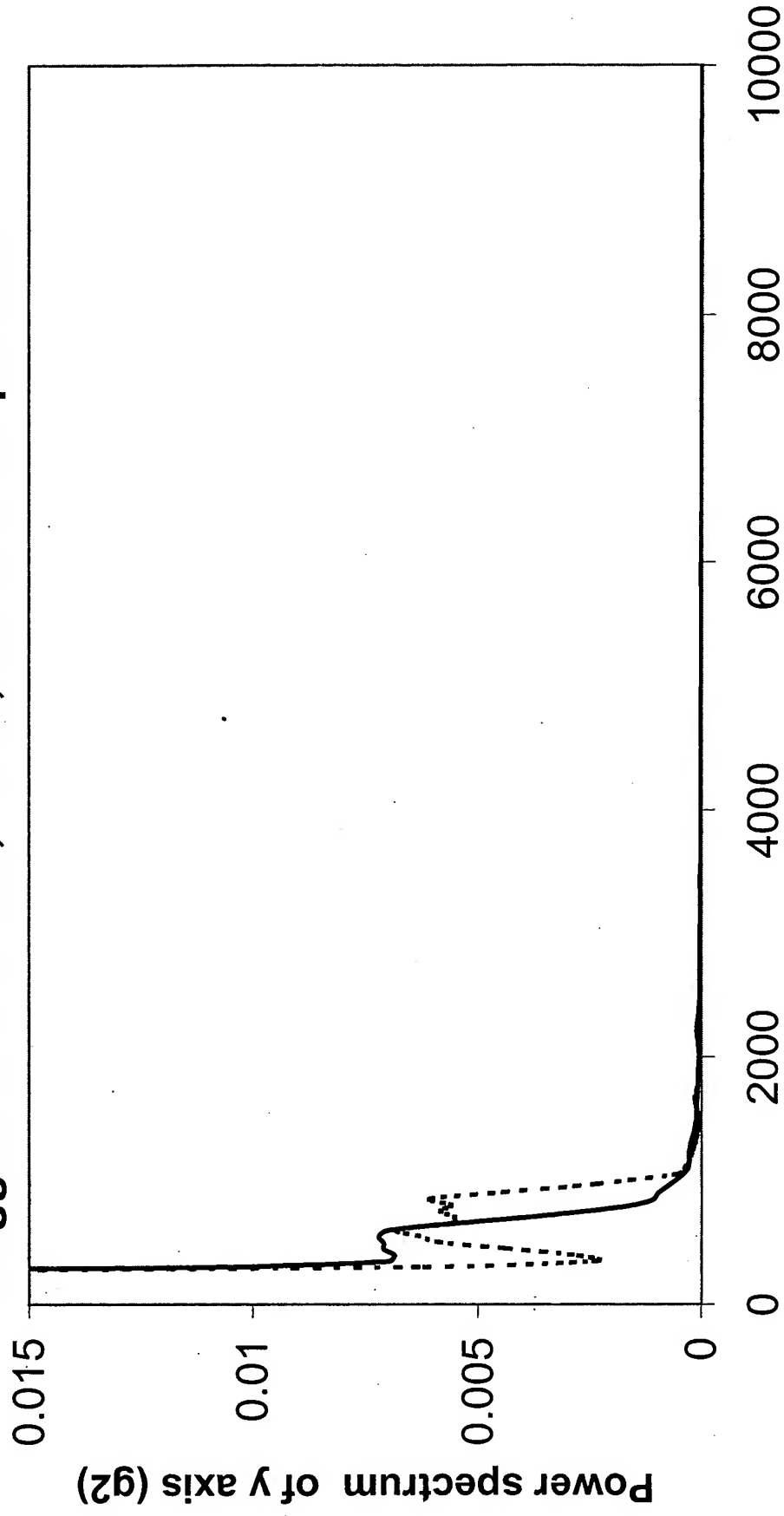
**Self propelled sprayer, full throttle, 8008 nozzle
clogged to 47% flow, 10 Hz, 300 kPa on periods**



Frequency (Hz)

Figure 14G

**Self propelled sprayer, full throttle, 8008 nozzle
clogged to 47% flow, 10 Hz, 300 kPa off periods**



Frequency (Hz)

Figure 14H

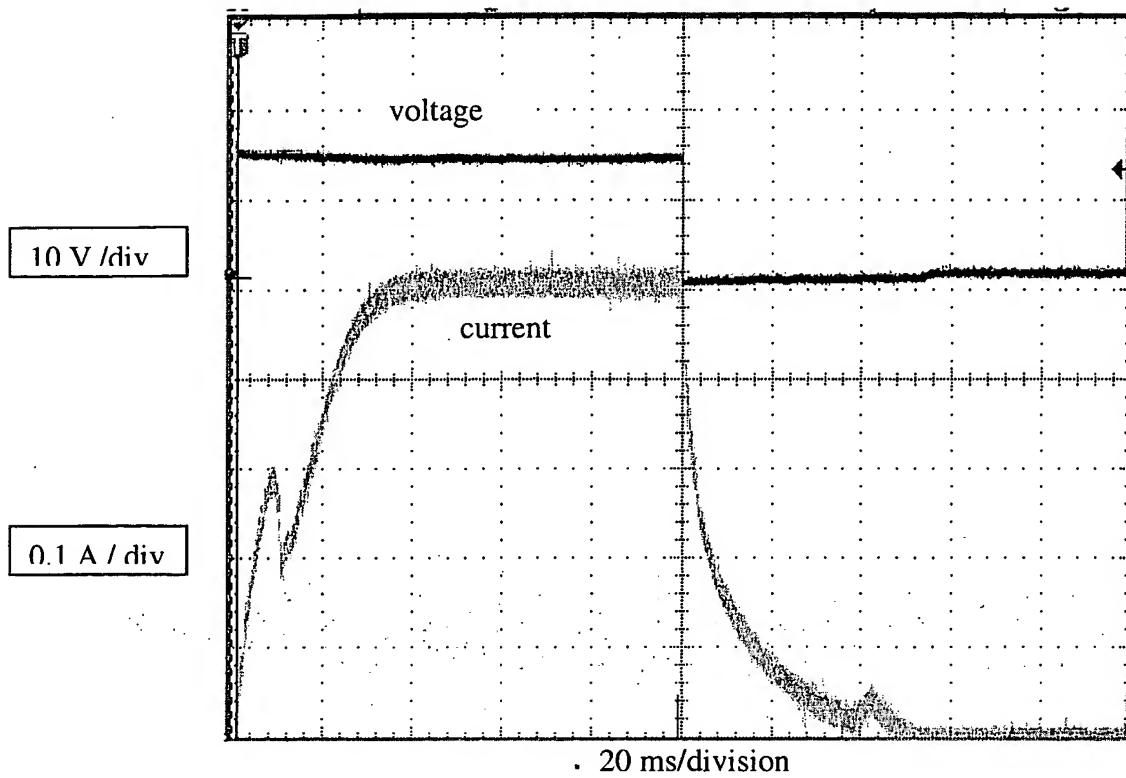
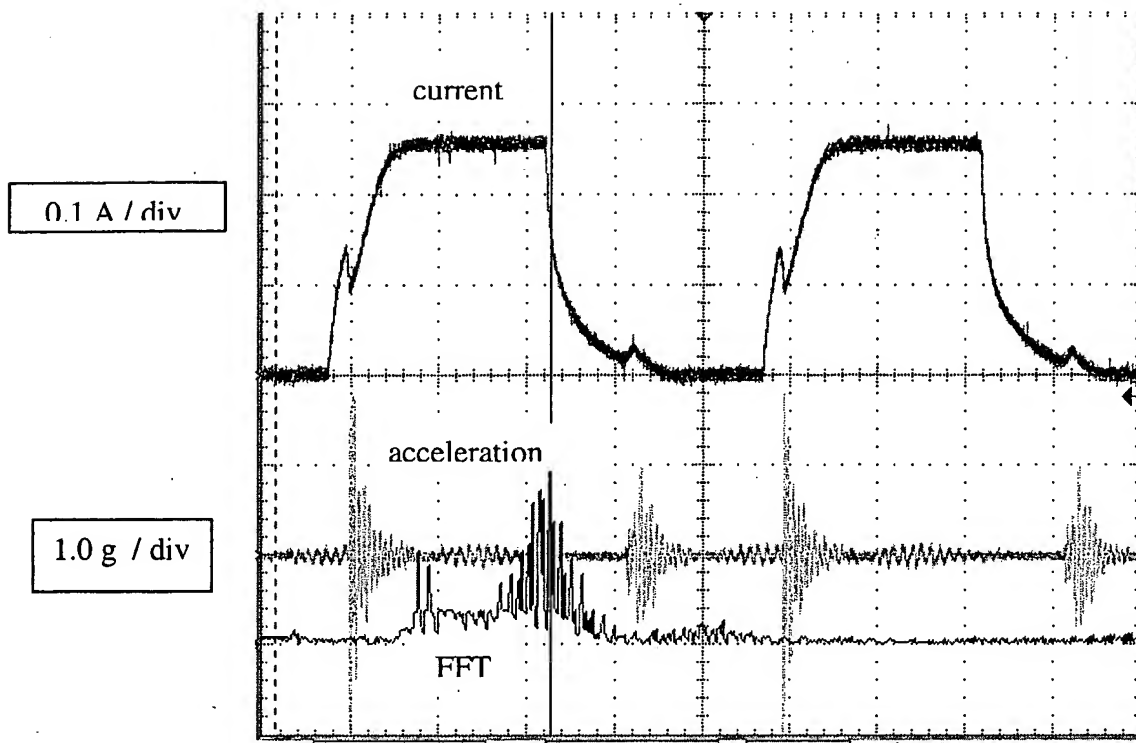


Figure 15A



20 ms/division

Figure 15B

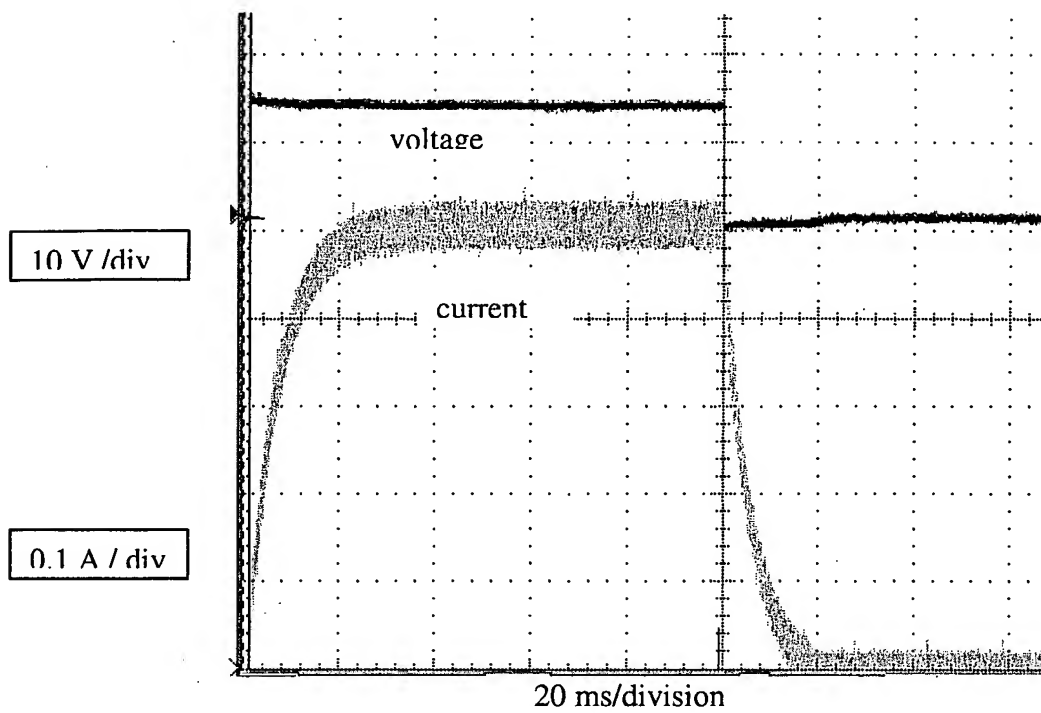


Figure 16A

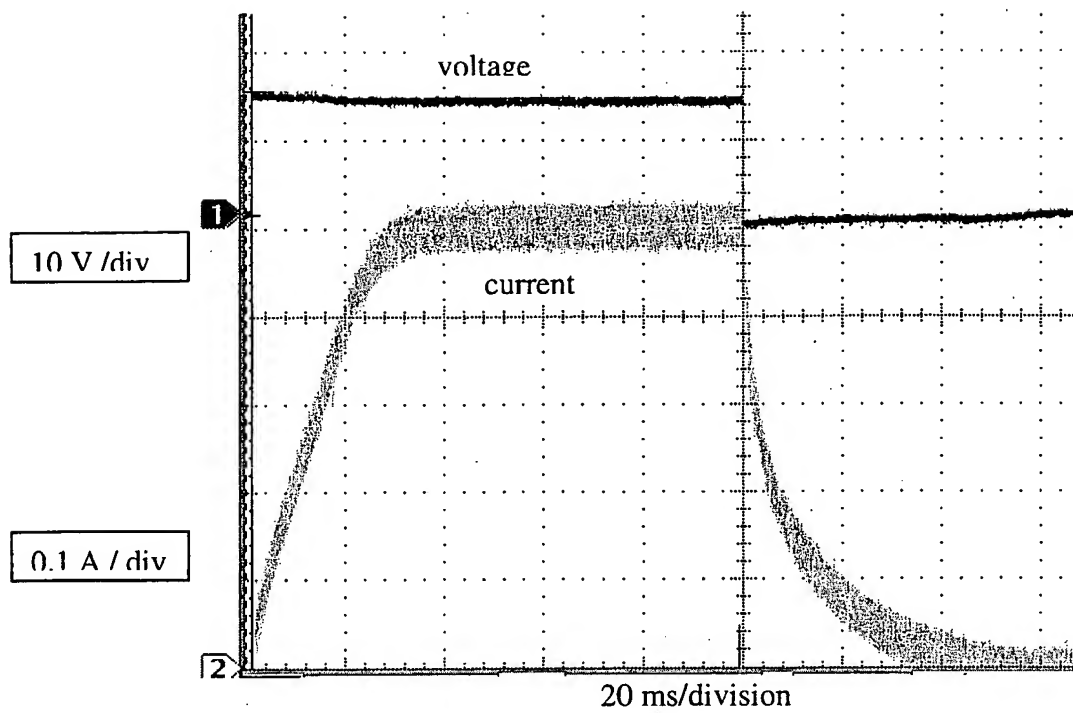


Figure 16B

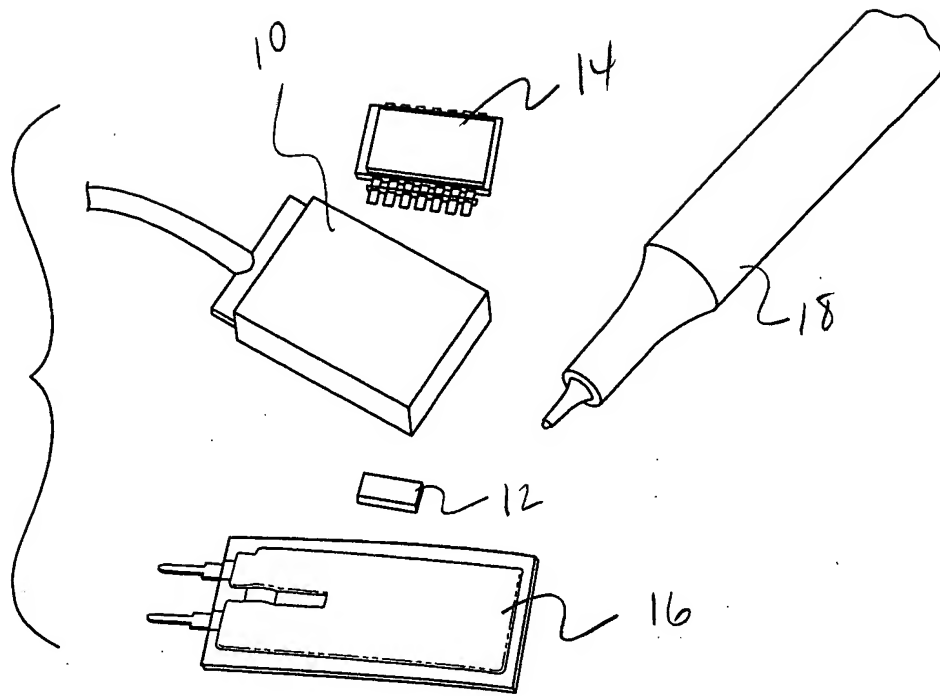


FIG. 17A

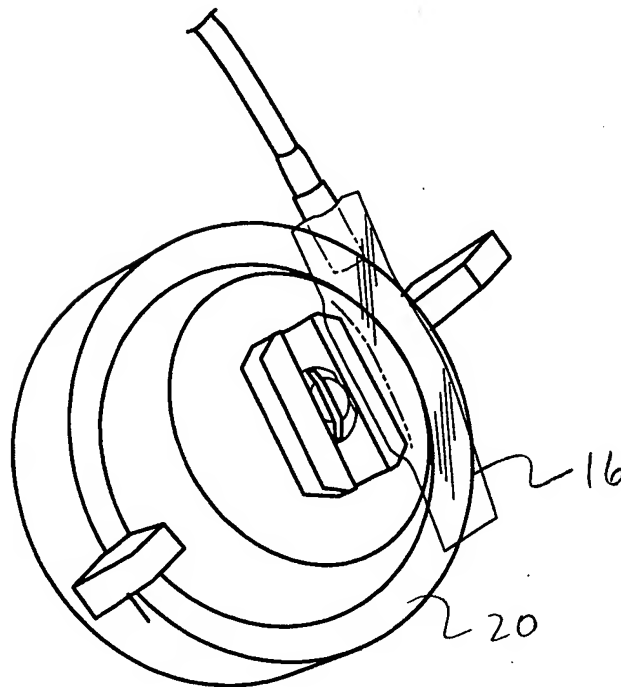
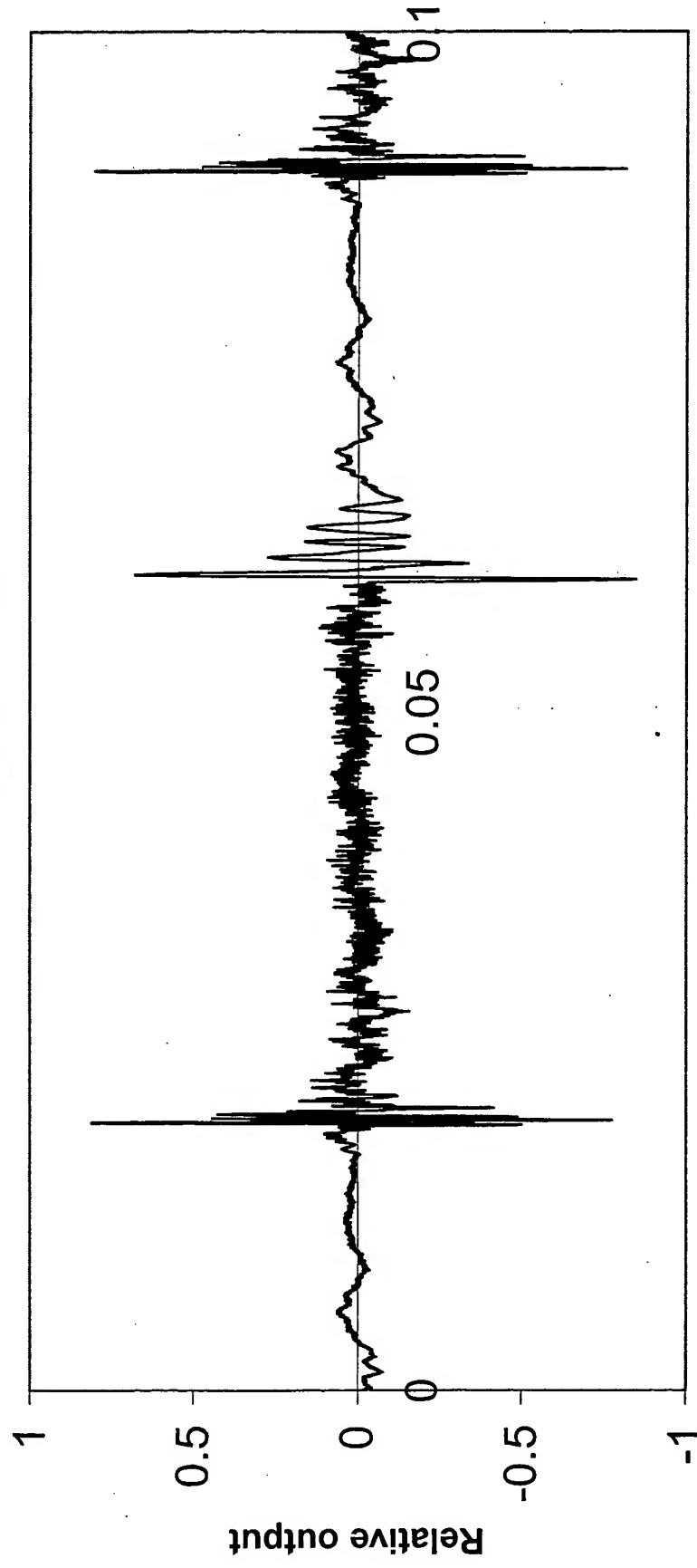


FIG. 17B

Accelerometer and piezo film output for 15 Hz 60% dc



Time (s)

— Accelerometer

Figure 18A

Accelerometer and piezo film output for 15 Hz 60% dc

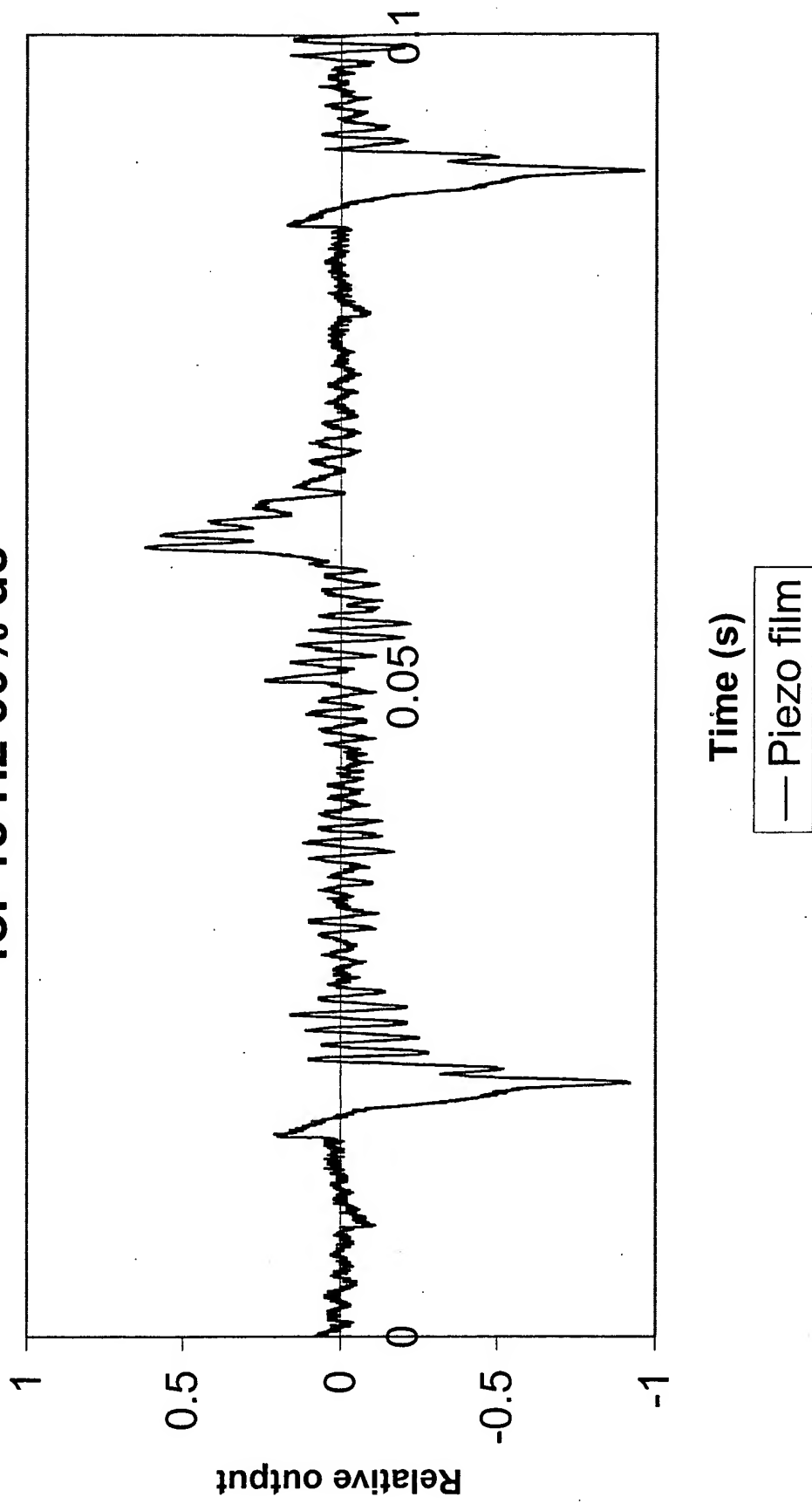


Figure 18B